

SEQUENCE LISTING

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 HINZMANN, BERND
 SCHMITT, ARMIN
 PILARSKY, CHRISTIAN
 DAHL, EDGAR
 ROSENTHAL, ANDRE

<120> HUMAN NUCLEIC ACID SEQUENCES FROM PROSTATE TISSUE

<130> ALBRE 10

<140> 09/623,746

<141> 2000-09-08

<150> PCT/DE99/00722

<151> 1999-03-09

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<170> PatentIn Ver. 2.1

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573

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662

<210> 19

<211> 750

<212> DNA

<213> Homo sapiens

<400> 19

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ggtgatgtcg ttgtgctccc ctccccaga gcgggtgggc ggggggtgaa tatggttggt 660
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<400> 20

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<210> 21
 <211> 1001
 <212> DNA
 <213> Homo sapiens

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<210> 22

<400> 22
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<210> 23
 <211> 580
 <212> DNA
 <213> Homo sapiens

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<210> 24
 <211> 740
 <212> DNA
 <213> Homo sapiens

<400> 24
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<210> 25

<400> 25

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<210> 26

<211> 975

<212> DNA

<213> Homo sapiens

<400> 26

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975

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<210> 27

<211> 854

<212> DNA

<213> Homo sapiens

<400> 27

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attttttatg aaagtTacta gtaatgcttt actaagtagt gcaatgaatt tttattTTTta 780
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854

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<210> 28

<211> 802

<212> DNA

<213> Homo sapiens

<400> 28

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gccattaggt aggaggaaat ctggagagtg aaaagggggc ttgcttttgt caaagtcctc 180
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atccgcgggc tccgccccgg ccttccgcgg gccaatcgca actcgggggc gggtcctcgg 720
gctatataaa ggagctccgc ggtgcgggag gcctttcgga gggTggtgag ctagtaagtg 780
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<210> 29

<211> 807

<212> DNA

<213> Homo sapiens

<400> 29

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caggctgtcc tggctgctct ggggaagccg agggacagcc ataacacccc cgggacagta 180
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807

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<210> 30

<211> 777

<212> DNA

<213> Homo sapiens

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<400> 30
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ccaactggca gccaggcagc cccagaggag agacagattc agacagagga aagtctccct 180
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gtaggagcgt tgggagcagc cttggcagat ggggcacccg tgccctgcag gtgttgacaa 720
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<210> 31
<211> 501
<212> DNA
<213> Homo sapiens

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catttcatga gcatctgaaa gcaggtgaat ttccccagcc tgattttcca gatgactaca 420
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501

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<210> 32
<211> 1104
<212> DNA
<213> Homo sapiens

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ccatatacat ggatgatgat gtaattgtgc aaggtgatat tcttgccctt tacaatacag 180
cactgaagcc aggacatgca gctgcatttt cagaagattg tgattcagcc tctactaaag 240
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tacatttttc aaaaaaaaaa aaaa
1104

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<210> 33
 <211> 810
 <212> DNA
 <213> Homo sapiens

<400> 33
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<210> 34

<400> 34
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<210> 35
 <211> 826
 <212> DNA
 <213> Homo sapiens

<400> 35
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 ccttgtcatt tgggggattt tattttactt tgttgcttta aaattcaatg cagagaagtt 780
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<210> 36
 <211> 578
 <212> DNA
 <213> Homo sapiens

<400> 36

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gcaccctcaa cggcgagatc agcgcctga cggccgaggc ggcattgcgtt cctgcggacg 540
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<210> 37

<211> 799

<212> DNA

<213> Homo sapiens

<400> 37

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ccatcatcat gtccacgtcg ctacgagtca gcccatccat ccatggctac cacttcgaca 180
cagcctctcg taagaaagcc gtgggcaaca tctttgaaaa cacagaccaa gaatcactag 240
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ccatagatca agatgtggag gagaaaacgc gtgccctgat ggccttgaag aagaggacaa 360
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atttgaaaac tcttccgtcc ctgcaggaaa ggattgacgc tgatagaaga gcctggacag 720
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<210> 38

<400> 38

000

<210> 39

<211> 1743

<212> DNA

<213> Homo sapiens

<400> 39

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aagcagggtcc cttgcccaga ccctcaggga gcccttttgg tggatagcgg acacctgagg 180
caggaggtgg caggggcca gtcaggcag gcagcagcag ggctgcaact gagagctgag 240
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tgctgcactt caaagaccag cagggtgctg gccacagaga tggcggaggc tgcagccgcc 420
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ttctccatga ttgagagcat atcctggctg gtcgtcact tgatgcgggg tagtgtagg 600
agagtgggct ggaacttgga catctccagt ttctccatga tggccttgaa aacagaaggg 660
ctgagagcct gttccatgtc ttcaagacga tgtttcaggt tctggggtac caggatcacc 720

```

```

aaactcagat tgtgggagag ctgcagctgc cccaccttgg ctttcaaagt ttggtcaatg 780
aaatgggcca caggggtactt cttgctattc atcatgggca cttttataac tgagtttttg 840
aagtgaagg gttccattct ggttttcttg ggatcaaag ttgtcttcca cttggcactc 900
aggtagatag cattgaggag gacaaggcgg gtatcggagg gcagactgtc tagcagccgg 960
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caagaagtac cctgtggccc atttcattga ccaaactttg aaagccaagg tggggcagct 1080
gcagctctcc cacaatctga gtttggtgat cctggtaccc cagaacctga aacatcgtct 1140
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tagggcgagc gctacctctc cagcctcagc tcttcagttg cagccctgct gctgcctgcc 1620
tggaattggc cctgccacc tcctgcctca ggtgtccgct atccaccaa agggtccct 1680
gagggctctg ggcaagggac cgtgcttcta attaagccct tcttccaatg ggccttgc 1740
ggc 1743

```

<210> 40

<400> 40
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<210> 41

<211> 1183

<212> DNA

<213> Homo sapiens

<400> 41

```

gccaatcgaa tcgtcctggg aggtttttca cagggcgggg cctgtccct ctacacggcc 60
ctcacctgcc cccacctctt ggctggcatt gtggcggtga gctgctggct gcctctgcac 120
cgggccttcc cccaggcagc taatggcagt gccaggacc tggccatact ccagtgccat 180
ggggagctgg acccatgggt gcccgtagcg tttggggccc tgacggctga gaagctccgg 240
tctgttgtca cacctgccag ggtccagttc aagacatacc cgggtgtcat gcacagctcc 300
tgtcctcagg agatggcagc tgtgaaggaa tttcttgaga agctgctgcc tcctgtctaa 360
ctagtctgtg gccccagtgc agtaccctag ctcatggggg actcagcaag caagcgtggc 420
accatcttgg atctgagccg gtcgagcccc tgtccccacc ctccctgacc tgtccttttc 480
ccacaggcct ctgggggcag gtggcaaggc ctggccgggc ctcccttccg ggccttagcc 540
acctggctct gtctgcagca ggggcaggct gctttcttat ccatttccct ggaggcgggc 600
ccccctggca gcagtattgg aggggctaca ggcagctgga gaaagggggc cagccgctga 660
cccactcact caggacctca ctactagcc ccgctttggg cccctcctg tgacctcagg 720
gtttggccca tggggccctc ccaggccctt gcccactg attctgcca gataatcgtg 780
tctcctgctt cactcagct gcttctcagt catgaatgtg gccatggccc cgggggtccc 840
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gctgtctcac cccactttg tccccactct agagcagggg ggcagtgggg gaggattgt 1080
gtctcgtctt ctgtctccat gtggtttttg ggtgtttttc ttgttgtgtc ctggattccg 1140
ataaaattaa agaaattgct tcctcaaaaa aaaaaaaaaa aaa 1183

```

<210> 42

<211> 768

<212> DNA

<213> Homo sapiens

<400> 42

```

gttttttttt ttactgcaga aaattgggtgg tatttttcaca ttcatagtgt ttctatccaa 60
tttcagtacc cacatttaac gaggaaaaaa tgttttacca atgaaggagg aattcttaaa 120
ttagctgtaa tgtaggttg gagaaaaattt ggtatttagg gtattttcaa ggtaccatca 180
aatcagatttt ctgttttttt gttaaaaaaa atttttttta tcagtattgt ttttacaagt 240
aatatacttt gaaactcttg aactaatagt ctcaaaaact ctagaggaca gtctgagaac 300
acgtattttct attgttctaa ataaatacat gtttttgaat agttcaatca tgaattattg 360
actatgtcctt catcaaaagt gttaatccct ctcaggggtct ctgggtgaaga ccttcaagag 420
tttggttttt tctcccagga aattggaagg tagaattgta aattcataga acttctttta 480
taatggtgta cctcagcagc tgcctttcaa tttatgccaa gtccttacag agtttatact 540
tgaatagtaa atatgtcttc tgagttttac agtgtcttaa actcaatgca catttttttt 600
tcttcttttt ccaccccttc ttgtttgtag ttcattatac ctgtcctatt acagaactga 660
tttccttctt ggctgtacat gttgggggtgc tggatttttt tccgtgtctt tagtcttcgg 720
atacatgttc tcttcttttag cttgtggtga atacagtaat ttgcattg 768

```

<210> 43

<211> 1029

<212> DNA

<213> Homo sapiens

<400> 43

```

ccctgctgtg aagtcctggc aggtgttggg aatgtgtgga aatgcagtca gcaagtttgc 60
tggggagttt gataaaagta taaaacaaaa caaaaaaagc ctcggtataa ttttgttcca 120
cgacttcttc tgtagcttta caccagaagg aaggaatggg ctacagcagg tagtggagga 180
agaggggggg gagcaggtgt attaaaatag cttacgggta aggcctaaaa ggtcaccctt 240
cggccccctc tccaaaagaa gggcatgggc acccccagga gaggatggcc ccaaaaacct 300
tatttttata catgagagta aataaacata ttttttttac aaaaataact tctgaattta 360
tcagtgtttt gccgttaaaa atattcctct atagtaaatt atttattgga agatgacttt 420
tttaaagctg ccgtttgcct tggcttgggt tcatacactg atttattttt ctatgccagg 480
cagtagagtc tctctgcctc tgaggagcag gctaccgcga tcccactcag cccctcccta 540
cccctcaaga ttgatgaaa attccaacca tgaggatggg tgcctcgggg aaggggtgaga 600
aggagagcct gcctgctcag ggatccaggc tcgtagagtc actccctgcc cgtctcccag 660
agatgcttca ccagcacctg cctctgagac ctgctctctt gttccagcaa ccctggttgg 720
ggggtcagac ttgatacact ttcagggttg gagtggaacc accccagggc ctgctgagga 780
cagagcagcc aggccgtcct ggctcacttt gcagttggca ctgggttggg gaggaagaga 840
gctgatgagt gtggcttccc tgagctgggg tttccctgct tgtccagttg tgagctgtcc 900
tcggtgttac cgaggctgtg cctagagagt ggagattttt gatgaaaggt gtgctcgctc 960
tctgcgttct atcttctctc tcctccttgt tccgtgcaac cacaagataa aggtagtggg 1020
gtgtctcga 1029

```

<210> 44

<211> 736

<212> DNA

<213> Homo sapiens

<400> 44

```

attcctgggt tgaaatattt tgtagggatt gottattata ttatttttagc tgatgaacct 60
caggacaacg gctacagaca cacacatata tacacgcaca caaaatctca gctgttgaag 120
agtgggcttg gaatcagact tctgtgtcca gtaaaaaact cctgcactga agtcattgtg 180
acttgagtag ttacagactg attccagtga acttgatcta atttcttttg atctaataa 240
tgtgtctgct taccttgttt ccttttaatt gataagctcc aagtagttgc taattttttg 300
acaactttaa atgagtttca ttcacttctt ttacttaatg ttttaagtat agtaccaata 360
atttcattaa cctgttctca agtggtttag ctaccattct gccattttta atttttattt 420
aattttattt gcttgagcac actgatcaac cactgaactg ccttcttcca ttgtcctgca 480
atgatataag gggttacattt ttgtgtatat ggctttcata gttgggattt cagagcactg 540

```

```

ataccagata ttttcagttt gttctctggg ggaatttcat ttgcatctat gtttttagct 600
atctgtgata acttggttaa tattaataaag atatttttgc tctattggaa cattttgtata 660
ctcgcaacta tatttctgta aacagctgca gtcaaaaata aaacactgaa agtttttcatt 720
ttgcagtggg aaaaaa                                     736

```

<210> 45

<400> 45
000

<210> 46

<211> 1159

<212> DNA

<213> Homo sapiens

<400> 46

```

ggaccgtgtg tcggccgtgg cgctgcccac gctgcccac tcgctcacca acaccgacct 60
caaggtggcc agcgacacac agttctaccc tggcctcggg ctggccctgg ccttccacga 120
cggcagcgtc cacatcgtgc accggctctc actgcagacc atggccgtct tctacagctc 180
cgcggccccc aggcctgtgg atgagccggc catgaagcgc ccccgccacc cgggccccgc 240
cgtccactta aaggctatgc agctatcgtg gacgtcactg gccctgggtg ggattgacag 300
ccacgggaag ctgagcgtgc tccgcctctc accttccatg ggccacccgc tggagggtggg 360
gctggcgctg cggcacctgc tcttctgtct ggagtactgc atggtgaccg gctacgactg 420
gtggggacatc ctgctgcacg tgcagcccag tatggtacag agcctgggtg agaagctgca 480
cgaggagtac acgcgccaga ccgctgccct gcagcaggtc ctctccacc ggatcctggc 540
catgaaggcc tcgctctgca agctgtcgcc ctgcacgggt acccgctgtg gcgactacca 600
caccaagctc ttcctcatcg ccatcagctc caccctgaag tcgctgctgc gccccactt 660
tctcaacacg cctgacaaga gccccggcga ccggtgacc gagatctgca ccaagatcac 720
cgacgtcgac attgacaagg tcatgatcaa cctcaagacg gaggaatttg tgctggacat 780
gaacacactg cagggcgctg cagcagctct tgcagtgggt gggcgacttc gtgctgtacc 840
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acggcacctc gctgggcatg cttcgggaat tgatggtggt catccgcac tggggccttc 960
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tgetcttccg cctgctcacc aagctctgga tctgctgtcg cgatgagggc ccagcgagcg 1080
agccggacga ggcgctgggt gatgaatgct gcctgctgcc cagccagctg cttatcccca 1140
gcctggactg gctgccagc                                     1159

```

<210> 47

<211> 690

<212> DNA

<213> Homo sapiens

<400> 47

```

agagcggccg cccctctttt tttctctttt tttttttttt tttttgcata tcagaaatgc 60
attttaattt ttatttgaaa acaacttaaa ttttttagaca aatgatttta gtatataaat 120
ttgcttttgt ttttatacag aatataaaga tttccctcat taatcttcca tgtgaagggt 180
attacaagcc tggaggaaga tactttctgc acacaagtat gtatcttatg tgtgcagtat 240
tggaaccaa tgggtgtagt ctcctacaca taaatggggt caagtacat cacaaattaa 300
aagggggaaa gagaaatatt ctagttaatc agatgcaaga agcaaacaag acgcaaaaac 360
tgtgcaaata agaccaagcc agtaacttta gttacgacac tgcagattac actggaataa 420
caggtttgtg aggtatagat gtgcaccaca ttaaaacagc aagaaagagc tatttatata 480
gaaaggctgg aatgagggat ttttactaaa gcaaattaac ttcttgtcaa ctgcaaaaac 540
aaaacaaaac tgagcatatg agtgtagta tactgaaggc atgttatacc agtttctgtg 600
cagcatgcta aaagttagaa cttcttcact ggtgcttatc aatcattaat agtcacgttt 660
ttgccccttc ttgccaaatt tcgaggcatg                                     690

```


<210> 48

<400> 48
000

<210> 49

<400> 49
000

<210> 50

<400> 50
000

<210> 51

<211> 1186

<212> DNA

<213> Homo sapiens

<400> 51

```

accatagatt tatttttaaaa gggaaaaatct cacacataat taagcagtgg aaaatgtgct 60
caatgctatg gtgcgtcagg ccctctgtct accagggtttc tcccgttttc tgcagagctg 120
tggaccctgt acgtaccaaa caggtgaact tgggccatct ttccttcttc ctttttttgc 180
acatttgcat ttatatcttc ctgtactaaa agaaacaaat tatttataat tggggtgaca 240
atataaagga acaaaaagatg gggcaatagt tgcttcctag ctggagctgt aagtccatgt 300
tacagaaact cactattttaa aaagttttaa aagatttatg aaccttgtcc tacaattcgc 360
tgaatactta tttgtctttt aaactcccct cgggtgatgg atcatcttcg tcagaatgcc 420
gttggtttcat tgtgaatcag gggaaaaatgt taatcatttg gagactgttt tcttattacc 480
aaatgtacaa tccataagac aactgaaagc aacaactgct gggttcactg acaaagatta 540
taaaaatcat cacgttcaaa gtagagtttt tagccaaggc caagaactaa cctggggctg 600
agtcagcgtc tctaccact taaataacag cgtaaagatc tttcactaaa ttcgttatgt 660
ggctctgtctg gatgtaaacc tatatatctt cttttgaaac agaatacatat cctgcagact 720
cttggcactc ctgcatagct ttgaccgaat gttcactctc atcgtaatgg aagatttcta 780
tctatgcaga taatacatgt ttttaaatac tgttttctgt ttagtcctca atcttcctaa 840
ctcaaattgg ggactgagga gagagaaagg tggttacccc tgttaccgtg ccatattctt 900
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cttcaagttt cagaaaactt tcccaatcat ttcacttcaa tcttaattga acccaagagt 1020
caaagttatt attttctccg aacgtgtttg tgatcttctg ttatatattg gggcatgtta 1080
cctttatggg atataagctg tagtgcatat tctttgtatt gcaaaaaact ggtcagtaat 1140
ttatgtacat gtattccaca ttttagtggt cttgaagtga caatcc 1186

```

<210> 52

<211> 1029

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (774)

<223> a, t, c or g

```

<400> 52
gggagaagga ggaggccggg ggaaggagga gacaggagga ggagggacca cgggggtggag 60
gggagataga cccagcccag agctctgagt ggtttcctgt tgcctgtctc taaacccctc 120
cacattcccg cggtccttca gactgcccgg agagcgcgct ctgcctgccg cctgcctgcc 180
tgccactgag gggtcccagc accatgaggg cctggatctt ctttctcctt tgcctggccg 240
ggagggcctt ggagcccct cagcaagaag ccctgcctga tgagacagag gtggtggaag 300
aaactgtggc agaggtgact gaggtatctg tgggagctaa tcctgtccag gtggaagtag 360
gagaatttga tgatggtgca gaggaaccg aagaggaggt ggtggcggaa aatccctgcc 420
agaaccacca ctgcaaacac ggcaagggtg gcgagctgga tgagaacaac acccccatgt 480
gcgtgtgcca ggaccccacc agctgcccag ccccatagg cgagtttgag aaggtgtgca 540
gcaatgacaa caagaccttc gactcttcct gccacttctt tgccacaaag tgcaccctgg 600
agggcaccaa gaagggccac aagctccacc tggactacat cgggccttgc aaatacatcc 660
ccccttgctt ggactctgag ctgaccgaat tccccctgcg catgcgggac tggctcaaga 720
acgtcctggg caccctgtat gagagggatg aggacaacaa ccttctgact gagnaagcag 780
aagctgcggg tgaagaagat ccatgagaat gagaagcgcc tggaggcagg agaccacccc 840
gtggagctgc tggcccgga cttcgagaag aactataaca tgtacatctt ccctgtacac 900
tggcagttcg gccagctgga ccagcaccac attgacgggt acctctccca caccgagctg 960
gctccactgc gtgctccct catcccatg gagcattgca ccaccggtt tttcgagacc 1020
gtgacctgg                                     1029

```

```

<210> 53
<211> 985
<212> DNA
<213> Homo sapiens

```

```

<400> 53
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gcacctgaa ccacccccca ttctgttca tttcagcaga taatgatgga gggggggggg 120
tgtccatcgt gctgaggggtg tgaccgcaag aggggtgaaa cttccagcca actttctcag 180
tcctttctct tgcgagaggg aagccacctg ctatacaaac taatacccc tgcttgacc 240
ccttccccac gactcagttg acagaaggat atactttgtt ataacttatt atttgttct 300
ctgtaaatac aagatgttta taggaaatat gtattctgaa ctctatctgc agaagagtc 360
actacaccaa aatagttcta ttatttagaa tgtgttaatt ttaaagggac ctgataggta 420
tttatttaca tatgcgatcc acatttgtgt gaaagcatgt gatcatacta acccagcctc 480
ctggaatgtc gctgtacgat gattgatgtc ttttctcag tccatagtta caattgttta 540
gtatgctaata cagtccagtt ccctgagggt taagatcaaa tataaattac tctgcttttc 600
gactcattca ggtagcattg tacctgaacc tgattgctac tttttcatct taaatattat 660
atttctcat ctaatctgcc ttccctctat ccacagacat ttggagaagg aaatgggagg 720
gtgtctgtta tccctttctc tttgctttgt ccccggtgtt agactggcag cgtcagttgc 780
tcggtgggct tgggttagagc cgtgggtgag gcagggtggc ggcgggggaca gggagaggct 840
gagaggggaag tgggtggcatt tactgctctg acacttccac tgtccctgct ggggatgctg 900
gggccaaggc ctgtggggcc tgtgaactgc acagccagga gcaaggaacc cactaaatac 960
tccgtcactg catgtccct ctaca                                     985

```

```

<210> 54
<211> 622
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> modified_base
<222> (622)
<223> a, t, c or g

```

```

<400> 54
atgtttttca tttttttcat gttatctatc caagcactgt tccatgggtca gcaagtcata 60

```

```

tttcataatg tggattttcc aaaataatta ttgaatacag ctattctatg gctactttta 120
gtgtttttgt ggtatgtggt gtgggagtgt ttatggaatt accagtatct taaattttca 180
aaggaacctt ggaagtctat cactctaaat gaaagtctgt cactctacat gaattatgtg 240
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gagagtttct agtttaaatgg gttaaattttt tgtgttgca atagtaagtt tagtcttctt 360
ataatatattc taaatgaaaa atcataggta tttgttacca tgtgtgaaga ttactttggt 420
aaaagcaaaa gtggtcgtgt gatatgctaa atgttaatta ctgattttat atgtttaaat 480
cacgccaaac aaattatgtc tgtgccatcc agggctctgtt gttaatcttt ttctgagtac 540
ttggattggg ataaagggct tgtactatgc actttttatt aatgaataaa tagaaaacgt 600
tagtaacaaa aaaaaaaaaa an 622

```

<210> 55

<211> 1129

<212> DNA

<213> Homo sapiens

<400> 55

```

gatttttatt tagaaactat atttacttaa acccccctca ggaaagaggt tttaaaatca 60
aagatgggaa aatcgagaa aattgccctt ccccatggcc agcttggtca tggatatacac 120
ttgtatgagc aaccaaagat aaacagacag aaaagcaaat ataacttgcc actaaccaag 180
atcacctctg caaaaagaaa tgaaaacaac ttttggcagg attctgtttc atctgacaga 240
attcagaagc agggaaaaaa gcctttttaa aataccgaga acattaaaaa ttcgcatttg 300
aagaaatcag cattttctaac tgaagtgagc caaaaggaaa attatgctgg ggcaaagtgt 360
agtgatccac cttctcctag tgttcttcca aagcctccta gtactggat gggaaagcact 420
gttgaaaatt ccaacccaaa caggagctg atggcagtag acttaaaaaac gctcctcaaa 480
gttcaaactt agatttcaga tttcagtatg tgtgtaaaac ataatttttc ccataatccct 540
ggactcttga gaaaattggg acagaaatgg aaatttgcct tgttgcaaca tacaattgca 600
aaagatgagt ttaaaaaatt acatacaaac agcttggtatt atattttata ttttgtaaat 660
actgtatacc atgtattatg tgtatattgt tcatacttga gaggtatatt atagttttgt 720
tatgaaagta tgtattttgc cctgcccaca ttgcagggtgt tttgtatata tacaatggat 780
aaattttaag tgtgtgctaa ggcacatgga agaccgattt tatttgcaca aggtactgag 840
atttttttca agaaacagct gtcaaatctc aagggtgaaga tctaaatgtg aacagtttac 900
taatgcacta ctgaagttaa aatctgtggc acaatcaatg taagcatggg gtttgtttct 960
ctaaattgat ttgtaatctg aaattactga acaactccta ttcccatttt tgctaaactc 1020
aatttctggg tttgggtatat atccattcca gcttaatgcc tctaatttta atgccaacaa 1080
aattggttgt aatcaaattt taaaataata ataattgggg cccccctt 1129

```

<210> 56

<400> 56

000

<210> 57

<400> 57

000

<210> 58

<211> 877

<212> DNA

<213> Homo sapiens

<400> 58

```

cacactgagg gtttttaaca ccattctccc ccacttctct cctgggtgac ataagagaga 60

```

```

aataacctgt agtacagcag ctaaagtatt ctcctttcag agaatttttt tggaggtctc 120
taatatatat tcccccttg tctctgtgat ctcttattta tactatatta ttgtcccatg 180
tacttttctaa actgagcttg gaacatttag tattcctgca attggacttc ccacttaaca 240
attatacaga ctttgctttt agaaatagat taggttccaa acagaaagtt caagtgtaac 300
aacaacaata aaaatagatt atgaaacagg ctataattgg ctcttttgga tttgataggg 360
gcaagatgaa aggcaacttt cttgcttttg aaatcatgtt gggtaagagg taaggaatcc 420
agctacaatt ttattagtgc ttgaaacggg cttccttgaa ttctccaggc cctatcattt 480
ttttttttct tactaatcag aagagagctg gggtagaagc cccatgtttg tattccatga 540
aacacgtcgg gttggagtaa aggcaaaaac agctagacac accaggtgtg tctgtttgac 600
at ttataaagc tggcactcat caacactcct gtttctcctt tctctgggac gtgtggatta 660
aggggtgtga gttgtgggaa gaattgccct cgtacctcct ggatttatta tttttctcaa 720
ataccaacca gtaagatccc aaataaacttg agaaaaattg tttcctgac tgtccacttc 780
tgggtgtcaaa gattttactc atcttcttag tacattctat gtattttata tgtataattt 840
tatacaatta aaaatagatt tttgtctagt gaaaaaaa 877

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<210> 59

<211> 1329

<212> DNA

<213> Homo sapiens

<400> 59

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gtcgggggagc gcggggccgg ggcccagggg accccggggc acggagagcg ggaagaggat 60
ggattgcccg gccctcccc ccggatggaa gaaggaggaa gtgatccgaa aatctgggct 120
aagtgtcggc aagagcgatg tctactactt cagtccaagt ggtaagaagt tcagaagcaa 180
gcctcagttg gcaagggtacc tgggaaatac tgttgatctc agcagttttg acttcagaac 240
tggaaagatg atgcctagta aattacagaa gaacaaacag agactgcgaa acgatcctct 300
caatcaaaat aagggtaaac cagaactgaa tacaacattg ccaattagac aaacagcatc 360
aattttcaaa caaccggtaa ccaaagtcac aaatcatcct agtaataaag tgaaatcaga 420
cccacaacga atgaatgaac agccacgtca gcttttctgg gagaagaggc tacaaggact 480
tagtgcacga gatgtaacag aacaaattat aaaaaccatg gaactacca aaggtcttca 540
aggagttggt ccaggtagca atgatgagac ctttttatct gctgttgcca gtgctttgca 600
cacaagctct gcgccaatca cagggcaagt ctccgctgct gtggaaaaga accctgctgt 660
ttggcttaac acatctcaac ccctctgcaa agctttttatt gtcacagatg aagacatcag 720
gaaacaggaa gagcgagtac agcaagtacg caagaaattg gaagaagcac tgatggcaga 780
catcttgctg cgagctgctg atacagaaga gatggatatt gaaatggaca gtggagatga 840
agcctaagaa tatgatcagg taactttcga ccgactttcc ccaagagaaa attcctagaa 900
attgaacaaa aatgtttcca ctggcttttg cctgtaagaa aaaaaatgta cccgagcaca 960
tagagctttt taatagcact aaccaatgcc ttttttagatg tattttttgat gtatatatct 1020
attattcaaa aaatcatgtt tattttgagt cctaggactt aaaattagtc ttttgtaata 1080
tcaagcagga ccctaagatg aagctgagct tttgatgcca ggtgcaatct actggaatg 1140
tagcacttac gtaaaacatt tgtttcccc acagttttta taagaacaga tcaggaattc 1200
taaataaatt tcccagttaa agattattgt gacttcactg tatataaaca tattttttata 1260
ctttattgaa aggggacacc tgtacattct tccatcatca ctgtaaagac aaataaatga 1320
ttatatcca 1329

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<210> 60

<211> 697

<212> DNA

<213> Homo sapiens

<400> 60

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gtaggcgcta gtctgggagc agagggtttct gggagccaag agtggtaatg gcgtctgtat 60
gatcttcgga gcctgctgca tcggacctcg gccagtcata aaagatgaca acagcagcca 120
ggccaacctt tgaacctgcc agagggtggaa ggggaaaaagg agaaggtgat ttgagccaac 180
tttcaaagca gtattcaagc agagacctac cctctcatc aaagataaaa tacagacaga 240
ctactcagga tgcccctgaa gaggttcgta accgtgactt caggagagag ttggaagaaa 300

```

```

gagagagagc tgctgcaaga gagaaaaata gggatcgtcc aacccgagaa catacaacct 360
cctcttcagt gtcaaaaaaag ccacgggttag accagattcc tgccgccaac cttgatgcag 420
atgaccctct aacagatgag gaagatgaag attttgaaga agaaagtgat gatgatgata 480
ctgcagctct tcttgcagaa ctggaaaaaa ttaaaaaaga aagagctgaa aagggccaag 540
gcccagggaa gggaccaagg gccaaaaaag ctttaagggg gggaagggtt tcgttttggg 600
aaaacattgg ttgggcggga aaccctttcc ctttaatctt gagcttggcc cattccaagc 660
ttaaggccga ctttgaaaaa tttgaaagga ggggtggg
697

```

```

<210> 61
<211> 1389
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> modified_base
<222> (810)
<223> a, t, c or g

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<400> 61
cgaagaatag aattggccag gacctaggtt ctcatattct tggatttcct cctggatgga 60
aaggctgttg gcatcaatag gggacagagg ctgatgctgg agtggccagt agagggtggtg 120
gagcagagca gccatctttt aagtgggggt gtatcaggct gggtttattt aaaagcaaca 180
aaatgttttg gttaagaaaa ttattttgct ttcagtgtaa atcttcgcag tgttctaaac 240
aaagttcagt cttctgctcg cccctttccc tcaactgatgt ctgcacttgg ttgaggtctc 300
ctggagcctc acaggctctg ctgttctcca cttctcacct gccatccacg ccctgcaagc 360
tcatgcaaac accctttctt cctcctgcgg cagagttggt caggttgcct gggcaggggc 420
ttaaacagtg ccagccccctg ccatcccaaa gctattgtta agccccccag gcgtcctcca 480
cccacgcccc ctagcctgcc atgtccacag ttccttgggc tgctgagggg ctagtgcagt 540
ggctcctgacc tctcttatca agagcacact tctttgctgg ttgctccttt tgagcatatg 600
cgtgtgatta tttggaacag ttagacttgc caggttgggt cagttttaga aattgtttct 660
agctagaggg actggtgtcc ttccaagtct agcatttggg gtatggaaaa ttgttgtggt 720
gtgtggtagg gtttttgttt tcttttttga gtttttttcc ccccttttagt ctctggctt 780
tttcccttcc cttcccttct ccactggccn agcttgggcc tcatcctcat gtcaccttc 840
taggaaggcg cctgccccat cttgtctgcc ggcagcatgc atccaaggcc agagctcagg 900
cctgcagact gggctggtgc ctctccgct tcagggtatg ggagttggtg aaggggcttt 960
caaaaaataa taagaaaaaa aaggtaaagt ctttggttagc ttctatccac tcagatcctg 1020
gaaggcagca aggttttgtg gatctagatt cattaggaat gtcttcttgt cagccaggcc 1080
aggaccggg cttgccaaga gcagaggccc tcccagcaac caggatacca ccactttggg 1140
ggctttgtgt acagaggtcc gggctcgaga cctcataggc tgcagaaatc tggggcagcc 1200
accatcaaga agccctctc aggggccac actcctttgc cagcgtggat ttctcaagt 1260
gggactgcat aattaaagca gttgcagttt tatttttttt acagcttttt tcccaaaaat 1320
gatttgtagt tgtgtgtgca gcacttcgcc ctgatatgtg tgctctacaa taaaaaccaa 1380
atctaatat
1389

```

```

<210> 62
<211> 535
<212> DNA
<213> Homo sapiens

```

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<400> 62
tgtattgagg taataaattg ttttactgac aatttttccct ttttctacac taaaacaata 60
tgtgatatat ttcccctctt gaagaggcaa ttcattaaac tctcaaattt tctatagaat 120
caagatagaa cttttagata ctccaactca caaaaatgta aaaaaactaa caaaaatatt 180
tggcttcaa taatgctaaa tatctacatt tttagaattt atcaacattt aactagataa 240
ttgggcatgt cttaattatg catgtactta tccatactaa taaaattgac aatgctagtg 300
catacttatt ggtttagtcc tattatcagg atataatcat ctgtgaggag gatattcaaa 360

```

| | | | | | | |
|------------|------------|------------|-------------|------------|-------------|-----|
| atactgtaaa | tgataacagt | taatgatata | cacatthaga | ctgagttgca | caactggcagg | 420 |
| gagacaaaaa | acattacttc | catacttggt | tcattgattct | tttttttttg | agagagtctc | 480 |
| actctgtcgc | caggctggga | gtacagtggc | atgatctcgg | ctcactgcaa | cctct | 535 |

<210> 63

<211> 1098

<212> DNA

<213> Homo sapiens

<400> 63

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|------------|------|
| gtgatttgac | atthgaacaa | attaggaagc | tgaatcctgc | agcaaaccac | agactcagga | 60 |
| atgattttccc | tgatgaaaaag | atccctaccc | taagggaagc | tgthgcagag | tgccataaac | 120 |
| ataacctcac | aatcttcttt | gatgtcaaaag | gccatgcaca | caaggctact | gaggctctaa | 180 |
| agaaaatgta | tatggaattt | cctcaactgt | ataataatag | tgtggtctgt | tctttcttgc | 240 |
| cagaagttat | ctacaagatg | agacaaacag | atcgggatgt | aataacagca | ttactcaca | 300 |
| gaccttgag | cctaagccat | acaggagatg | ggaaaccacg | ctatgatact | ttctggaaac | 360 |
| atthtatatt | tgthtatgatg | gacatthtgc | tcgattggag | catgcataat | atcttgthgt | 420 |
| acctgtgtgg | aatthtcagct | ttcctcatgc | aaaaggattt | tgtatccccg | gcctacttga | 480 |
| agaagtgtgc | agctaaaagga | atccaggttg | ttggttgag | tgthaatacc | tttgatgaaa | 540 |
| agagttacta | cgaatcccat | cttggttcca | gctatatcac | tgacagcatg | gtagaagact | 600 |
| gcgaacctca | cttctagact | ttcacggtgg | gacgaaacgg | gttcagaaac | tgccaggggc | 660 |
| ctcatacagg | gatatacaaaa | taccctttgt | gctagcccag | gccctgggga | atcaggtgac | 720 |
| tcacacaaat | gcaatagttg | gtcactgcat | ttttacctga | accaaagcta | aacctggtgt | 780 |
| tgccaccatg | caccatggca | tgccagagtt | caacactgtt | gctcttgaaa | atctgggtct | 840 |
| gaaaaaacgc | acaagagccc | ctgccctgcc | ctagctgagg | cacacaggga | gacctagtga | 900 |
| ggataagcac | agattgaatt | gtacaatttg | cagatgcaga | tgtaaatgca | tgggacatgc | 960 |
| atgataactc | agagttgaca | ttttaaaact | tgccacactt | atthcaaata | tttgtactca | 1020 |
| gctatgttaa | catgtactgt | agacatcaaa | cttgthggcca | tactaataaa | atthataaaa | 1080 |
| ggagcactaa | aggaaaaa | | | | | 1098 |

<210> 64

<211> 1860

<212> DNA

<213> Homo sapiens

<400> 64

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| taagatcctg | actctgaagc | ttcaaagtga | cactgtggaa | atctgaaacg | aggggatgtc | 60 |
| atgaaggcag | ctthtcttht | tctgaggaaa | aaataggcat | gggctacagg | actatthtaa | 120 |
| atgtctcatt | tacagtataa | aactcaaaag | tagatgtaat | ttttacacct | atgagtattt | 180 |
| gtccaatthc | tgtctcttcc | tcaccattgg | gtatctattc | tttatatgta | aataagataa | 240 |
| ggatcatctga | tagccttatt | cagtcttcat | cattthtcatc | attgttccta | tgtagattat | 300 |
| tggaatttta | ttgtagcact | acataactga | ttataaaaaat | ctgtaaatga | attagcactt | 360 |
| tcataattgaa | acaagcctgc | tagcctatgt | ataaaaatagc | aaaatgtttg | ctgtttataa | 420 |
| aaagatgtaa | tggtgtgggg | ggcaggggta | atthcaagtt | atthaatthaa | aaatgaacta | 480 |
| gcaatthtgt | acctggtgac | tttgtggtgc | actcacctct | gatagtgaact | tgaattcggt | 540 |
| atgtaaaaag | gggttagtgg | tatttcattg | ctgctaataaa | tgacaactcc | ctctgtgtcc | 600 |
| tgthtttctt | aaagctgtca | gtgtacaagt | gggtatttga | ataccagacc | ttactgtaaa | 660 |
| aaataaaaaa | gggtgtatct | agagcatgta | aattggatat | aaagtctctgc | tcttaaaagag | 720 |
| ttgatctaag | agtatggcta | aacatctata | tatgcaatct | atthaaaagaa | cttaattcgg | 780 |
| ctattatgtc | ttgatttgat | tgcatthttt | tcctaattat | aacaaattht | tcctcattgg | 840 |
| cctgtthttta | atcctgtgcc | tagaaggagt | acaaaatgca | cactthtaca | aattgatatt | 900 |
| taacacttac | ccactccctt | ttcccatctt | cttctaccgc | tcttgthgat | cgthgtatct | 960 |
| gatcttgact | agataggctg | aaggcacatg | gttccctcca | aaaaccacta | ttgataccac | 1020 |
| tacaaaaaca | agccagcaaa | aagatactgt | agagaggttg | gcttgcttcc | ctctcttctt | 1080 |
| aactgcatgt | tgaaaaataa | gccgttattg | atctthaaaca | tcggtcagat | gagtcataca | 1140 |
| ttgggttatt | ttthtatatac | atgtatacac | aaaatatttc | aaattgaaag | caacatctta | 1200 |

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atggattcaa aactattaca agctgttgct taaaacaggt gagaaaaaaa tttataactg 1260
taaaaacaaa tgcacatatt gatattttaa atgcgtaatt aagaaaaccc attgttggtg 1320
tgtttttctt gtataccaat aattaagcca ctactgttgg cactgtttgg ttttctatct 1380
taacactgaa ggagtgaaag tatttcctat atttatgaat ttactactaa aatcttggca 1440
aaaaaagaaa aaaattgtct aacgtgtgtg ggtgaaaact gttaatcaag tgtttctact 1500
cccccccgaa aatccccctga aagttggaca ccaactgtat accctagggt gcttaaaggg 1560
atttcactat tatataaagt caataaaaat gaagtagttg tatatatgca acattgtgta 1620
cagaggggaa ataatgaata gtattaaaga aacattctcg tcttccttta cctttaatcc 1680
cctaatacct agtctacttt ttaaattttc agacttcact gctttttgaa ttcataattc 1740
taattttcac attattgtta atggaaaatc atatctaata aagggttttag ttattcccat 1800
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<210> 65

<400> 65

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<210> 66

<211> 205

<212> PRT

<213> Homo sapiens

<400> 66

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Cys Arg Thr Trp Ser Ile Leu Arg Gly Arg Met Trp Leu Ser Thr Asn
 1              5              10              15
Ser Ala Ala Asp Ala Ile Asn Pro Trp Pro Gly Arg Ser Ser Arg Pro
          20          25          30
Arg Ser Arg Ala Ala Val Pro His Arg Leu Leu His Leu Pro Pro Val
      35          40          45
Cys Ala Glu Leu Gln Gly Gln Gln Phe Tyr Ser Leu Glu Gly Ala Pro
      50          55          60
Tyr Cys Glu Gly Cys Tyr Thr Asp Thr Leu Glu Lys Cys Asn Thr Cys
      65          70          75          80
Gly Glu Pro Ile Thr Asp Arg Met Leu Arg Ala Thr Gly Lys Ala Tyr
          85          90          95
His Pro His Cys Phe Thr Cys Val Val Cys Ala Arg Pro Leu Glu Gly
      100          105          110
Thr Ser Phe Ile Val Asp Gln Ala Asn Arg Pro His Cys Val Pro Asp
      115          120          125
Tyr His Lys Gln Tyr Ala Pro Arg Cys Ser Val Cys Ser Glu Pro Ile
      130          135          140
Met Pro Glu Pro Gly Arg Asp Glu Thr Val Arg Val Val Ala Leu Asp
      145          150          155          160
Lys Asn Phe His Met Lys Cys Tyr Lys Cys Glu Asp Cys Gly Lys Pro
      165          170          175

```

Leu Ser Ile Glu Ala Asp Asp Asn Gly Cys Phe Pro Leu Asp Gly His
 180 185 190

Val Leu Cys Arg Lys Cys His Thr Ala Arg Ala Gln Thr
 195 200 205

<210> 67

<211> 150

<212> PRT

<213> Homo sapiens

<400> 67

Ala Ala Arg Ala Leu Lys Arg Pro Phe Pro Ser Gly Pro Pro Leu Arg
 1 5 10 15

Asp Arg Ser Pro Ser Leu Glu Ser Gln Ser Arg Lys Thr Pro Arg Leu
 20 25 30

Pro Glu Asp Leu Ala Ser Gly Lys Lys Asp Tyr Thr Phe Gln Arg Pro
 35 40 45

Leu Arg Arg Arg Asp Arg Lys Arg Arg Ala Ser Arg Val Ser Leu Arg
 50 55 60

Val Asp Pro Ser Asp His Gly Gly Pro Gly Val Val Ala Asp Glu Val
 65 70 75 80

Pro His Gln Gly Lys Cys Gly Trp Gly Arg Arg Leu Pro Gly Val Arg
 85 90 95

Pro Gly Ala Ala Gly Ala Gln Arg Gln Glu Pro Gly Ser Pro Thr Glu
 100 105 110

Gly Trp Gly Gly Gly Pro Pro Arg His Val Pro Val Gln Pro Val Arg
 115 120 125

Val Ser Ala Asp Arg Pro Ala Asp Thr Pro Ala Pro Ser Pro Ser Lys
 130 135 140

Asp Leu Leu Ser His Pro
 145 150

<210> 68

<211> 55

<212> PRT

<213> Homo sapiens

<400> 68

Leu Leu Glu Cys Arg His His Asp Gly Asp Val Ser Ser Val Gly Gly
 1 5 10 15

Pro Leu Gln Gly Pro Arg Val Leu Gln Gly Gly Leu Gly Val Cys Glu
 20 25 30

Gly Ala His Gln Val Ala Ser Gln Gln Gly Arg Leu Pro Arg Pro Glu
 35 40 45

Arg Ala Gly Leu Pro Leu Thr
 50 55

<210> 69
 <211> 182
 <212> PRT
 <213> Homo sapiens

<400> 69
 Ser Val His Phe Pro Ala Ala Leu Arg Cys Glu Thr Ala Ala Leu Leu
 1 5 10 15
 Trp Ser Leu Arg Ala Ala Arg His His Asp Ser Gln Arg Thr Leu Arg
 20 25 30
 Arg Ala Arg Lys Thr Thr Pro Ser Arg Gly Leu Cys Gly Ala Ala Thr
 35 40 45
 Gly Ser Gly Gly Arg Ala Glu Cys Pro Cys Ala Trp Ile Arg Ala Thr
 50 55 60
 Met Val Ala Arg Val Trp Ser Leu Met Arg Phe Leu Ile Lys Gly Ser
 65 70 75 80
 Val Ala Gly Gly Ala Val Tyr Leu Val Tyr Asp Gln Glu Leu Leu Gly
 85 90 95
 Pro Ser Asp Lys Ser Gln Ala Ala Leu Gln Lys Ala Gly Glu Val Val
 100 105 110
 Pro Pro Ala Met Tyr Gln Phe Ser Gln Tyr Val Cys Gln Gln Thr Gly
 115 120 125
 Leu Gln Ile Pro Gln Leu Pro Ala Pro Pro Lys Ile Tyr Phe Pro Ile
 130 135 140
 Arg Asp Ser Trp Asn Ala Gly Ile Met Thr Val Met Ser Ala Leu Ser
 145 150 155 160
 Val Ala Pro Ser Lys Ala Arg Glu Tyr Ser Lys Glu Gly Trp Glu Tyr
 165 170 175
 Val Lys Ala Arg Thr Lys
 180

<210> 70
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 70
 Pro Glu Asp Ser Gly Leu Gly Pro His Ser Glu Gly Arg Pro Pro Asp
 1 5 10 15

Cys Arg Pro Asn Lys Gly Leu Gln Lys
 20 25

<210> 71
 <211> 56
 <212> PRT
 <213> Homo sapiens

<400> 71
 Asp Glu Lys Asn Thr Ser Phe Leu Tyr Ser Asp Val Gly Ala Thr Ser
 1 5 10 15
 Met Lys Ser Val Leu Tyr Glu Ser Tyr Thr Lys Met Gly Arg His Leu
 20 25 30
 Val Asn Cys Ala Arg Tyr Leu Lys Cys Met Phe Arg Lys Ala Phe Tyr
 35 40 45
 Gln Leu Arg Asn Met Thr Tyr Phe
 50 55

<210> 72

<400> 72
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<210> 73
 <211> 291
 <212> PRT
 <213> Homo sapiens

<400> 73
 Leu Glu Arg Leu Val Asp Ile Lys Lys Gly Asn Thr Leu Leu Leu Gln
 1 5 10 15
 His Leu Lys Arg Ile Ile Ser Asp Leu Cys Lys Leu Tyr Asn Leu Pro
 20 25 30
 Gln His Pro Asp Val Glu Met Leu Asp Gln Pro Leu Pro Ala Glu Gln
 35 40 45
 Cys Thr Gln Glu Asp Val Ser Ser Glu Asp Glu Asp Glu Glu Met Pro
 50 55 60
 Glu Asp Thr Glu Asp Leu Asp His Tyr Glu Met Lys Glu Glu Glu Pro
 65 70 75 80
 Ala Glu Gly Lys Lys Ser Glu Asp Asp Gly Ile Gly Lys Glu Asn Leu
 85 90 95
 Ala Ile Leu Glu Lys Ile Lys Lys Asn Gln Arg Gln Asp Tyr Leu Asn
 100 105 110
 Gly Ala Val Ser Gly Ser Val Gln Ala Thr Asp Arg Leu Met Lys Glu
 115 120 125

Leu Arg Asp Ile Tyr Arg Ser Gln Ser Phe Lys Gly Gly Asn Tyr Ala
 130 135 140
 Val Glu Leu Val Asn Asp Ser Leu Tyr Asp Trp Asn Val Lys Leu Leu
 145 150 155 160
 Lys Val Asp Gln Asp Ser Ala Leu His Asn Asp Leu Gln Ile Leu Lys
 165 170 175
 Glu Lys Glu Gly Ala Asp Phe Ile Leu Leu Asn Phe Ser Phe Lys Asp
 180 185 190
 Asn Phe Pro Phe Asp Pro Pro Phe Val Arg Val Val Ser Pro Val Leu
 195 200 205
 Ser Gly Gly Tyr Val Leu Gly Gly Gly Ala Ile Cys Met Glu Leu Leu
 210 215 220
 Thr Lys Gln Gly Trp Ser Ser Ala Tyr Ser Ile Glu Ser Val Ile Met
 225 230 235 240
 Gln Ile Ser Ala Thr Leu Val Lys Gly Lys Ala Arg Val Gln Phe Gly
 245 250 255
 Ala Asn Lys Ser Gln Tyr Ser Leu Thr Arg Ala Gln Gln Ser Tyr Lys
 260 265 270
 Ser Leu Val Gln Ile His Glu Lys Asn Gly Trp Tyr Thr Pro Pro Lys
 275 280 285
 Glu Asp Gly
 290

 <210> 74
 <211> 253
 <212> PRT
 <213> Homo sapiens

 <400> 74
 Arg Ser Val Val Arg Arg Cys Leu Lys Met Ala Ala Glu Glu Pro Gln
 1 5 10 15
 Gln Gln Lys Gln Glu Pro Leu Gly Ser Asp Ser Glu Gly Val Asn Cys
 20 25 30
 Leu Ala Tyr Asp Glu Ala Ile Met Ala Gln Gln Asp Arg Ile Gln Gln
 35 40 45
 Glu Ile Ala Val Gln Asn Pro Leu Val Ser Glu Arg Leu Glu Leu Ser
 50 55 60
 Val Leu Tyr Lys Glu Tyr Ala Glu Asp Asp Asn Ile Tyr Gln Gln Lys
 65 70 75 80
 Ile Lys Asp Leu His Lys Lys Tyr Ser Tyr Ile Arg Lys Thr Arg Pro
 85 90 95

Asp Gly Asn Cys Phe Tyr Arg Ala Phe Gly Phe Ser His Leu Glu Ala
 100 105 110

Leu Leu Asp Asp Ser Lys Glu Leu Gln Arg Phe Lys Ala Val Ser Ala
 115 120 125

Lys Ser Lys Glu Asp Leu Val Ser Gln Gly Phe Thr Glu Phe Thr Ile
 130 135 140

Glu Asp Phe His Asn Thr Phe Met Asp Leu Ile Glu Gln Val Glu Lys
 145 150 155 160

Gln Thr Ser Val Ala Asp Leu Leu Ala Ser Phe Asn Asp Gln Ser Thr
 165 170 175

Ser Asp Tyr Leu Val Val Tyr Leu Arg Leu Leu Thr Ser Gly Tyr Leu
 180 185 190

Gln Arg Glu Ser Lys Phe Phe Glu His Phe Ile Glu Gly Gly Arg Thr
 195 200 205

Val Lys Glu Phe Cys Gln Gln Glu Val Glu Pro Met Cys Lys Glu Ser
 210 215 220

Asp His Ile His Ile Ile Ala Leu Ala Gln Ala Leu Ser Val Ser Ile
 225 230 235 240

Gln Val Glu Tyr Met Asp Arg Gly Glu Gly Gly Thr Thr
 245 250

<210> 75

<211> 108

<212> PRT

<213> Homo sapiens

<400> 75

Glu Lys Phe Leu Asn Met Gly Ala Pro Leu Gly Val Gly Leu Gly Leu
 1 5 10 15

Val Phe Val Ser Ser Ile Gly Ile Tyr Val Ser Ser Thr Tyr Pro Pro
 20 25 30

Val Ala Gly Ala Thr Leu Tyr Ser Val Ala Met Tyr Gly Gly Leu Val
 35 40 45

Leu Phe Ser Met Phe Leu Leu Tyr Asp Thr Gln Lys Val Ile Lys Arg
 50 55 60

Ala Glu Val Ser Pro Met Tyr Gly Val Gln Lys Tyr Asp Pro Ile Asn
 65 70 75 80

Ser Met Leu Ser Ile Tyr Met Asp Thr Leu Asn Ile Phe Met Arg Val
 85 90 95

Ala Thr Met Leu Ala Thr Gly Gly Asn Arg Lys Lys
 100 105

<210> 76

<400> 76
000

<210> 77

<400> 77
000

<210> 78

<400> 78
000

<210> 79

<400> 79
000

<210> 80

<400> 80
000

<210> 81

<400> 81
000

<210> 82

<211> 164

<212> PRT

<213> Homo sapiens

<400> 82

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | His | Arg | Asp | Ser | Cys | Pro | Leu | Asp | Cys | Lys | Val | Tyr | Val | Gly | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Asn | Asn | Gly | Asn | Lys | Thr | Glu | Leu | Glu | Arg | Ala | Phe | Gly | Tyr |
| | | 20 | | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Gly | Pro | Leu | Arg | Ser | Val | Trp | Val | Ala | Arg | Asn | Pro | Pro | Gly | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Val | Glu | Phe | Glu | Asp | Pro | Arg | Asp | Ala | Ala | Asp | Ala | Val | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Asp | Gly | Arg | Thr | Leu | Cys | Gly | Cys | Arg | Val | Arg | Val | Glu | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

Ser Asn Gly Glu Lys Arg Ser Arg Asn Arg Gly Pro Pro Pro Ser Trp
 85 90 95
 Gly Arg Arg Pro Arg Asp Asp Tyr Arg Arg Arg Ser Pro Pro Pro Arg
 100 105 110
 Arg Arg Ser Pro Arg Arg Arg Ser Phe Ser Arg Ser Arg Ser Arg Ser
 115 120 125
 Leu Ser Arg Asp Arg Arg Arg Glu Arg Ser Leu Ser Arg Glu Arg Asn
 130 135 140
 His Lys Pro Ser Arg Ser Phe Ser Arg Ser Arg Ser Arg Ser Arg Ser
 145 150 155 160
 Asn Glu Arg Lys

<210> 83
 <211> 148
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (121)
 <223> Any naturally occurring amino acid

<400> 83
 Glu Ala Ala Leu Thr Leu Cys His Leu Leu Ser Ser Trp Val Ser Leu
 1 5 10 15
 Glu Ser Leu Thr Leu Ser Tyr Asn Gly Leu Gly Ser Asn Ile Phe Arg
 20 25 30
 Leu Leu Asp Ser Leu Arg Ala Leu Ser Gly Gln Ala Gly Cys Arg Leu
 35 40 45
 Arg Ala Leu His Leu Ser Asp Leu Phe Ser Pro Leu Pro Ile Leu Glu
 50 55 60
 Leu Thr Arg Ala Ile Val Arg Ala Leu Pro Leu Leu Arg Val Leu Ser
 65 70 75 80
 Ile Arg Val Asp His Pro Ser Gln Arg Asp Asn Pro Gly Val Pro Gly
 85 90 95
 Asn Ala Gly Pro Pro Ser His Ile Ile Gly Asp Glu Glu Ile Pro Glu
 100 105 110
 Asn Cys Leu Glu Gln Leu Glu Met Xaa Ile Ser Thr Gly Ser Pro Ala
 115 120 125
 Ser Pro Thr Ala Val Leu Arg Ser Glu Gly Leu Gly Phe Ser Ala Ala
 130 135 140

Ala Val Pro Gly
145

<210> 84

<400> 84
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<210> 85

<400> 85
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<210> 86

<400> 86
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<210> 87

<400> 87
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<210> 88

<400> 88
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<210> 89

<400> 89
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<210> 90

<211> 145

<212> PRT

<213> Homo sapiens

<400> 90

Glu Asp Gly Ala Asp Gly Ala Phe Tyr Pro Asp Glu Ile Gln Arg Pro
1 5 10 15

Pro Val Arg Val Pro Ser Trp Gly Leu Glu Asp Asn Val Val Cys Ser
20 25 30

Gln Pro Ala Arg Asn Phe Ser Arg Pro Asp Gly Leu Glu Asp Ser Glu
35 40 45

Asp Ser Lys Glu Asp Glu Asn Val Pro Thr Ala Pro Asp Pro Pro Ser
50 55 60

Gln His Leu Arg Gly His Gly Thr Gly Phe Cys Phe Asp Ser Ser Phe
 65 70 75 80
 Asp Val His Lys Lys Cys Pro Leu Cys Glu Leu Met Phe Pro Pro Asn
 85 90 95
 Tyr Asp Gln Ser Lys Phe Glu Glu His Val Glu Ser His Trp Lys Val
 100 105 110
 Cys Pro Met Cys Ser Glu Gln Phe Pro Pro Asp Tyr Asp Gln Gln Val
 115 120 125
 Phe Glu Arg His Val Gln Thr His Phe Asp Gln Asn Val Leu Asn Phe
 130 135 140
 Asp
 145

<210> 91
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 91
 Asp Lys Ser Ser Ala Cys Arg Arg Asn Gly Asn Tyr Ser Asp Glu Lys
 1 5 10 15
 Lys Asp Ala Met Tyr Trp Glu Lys Arg Arg Lys Asn Asn Glu Ala Ala
 20 25 30
 Lys Arg Ser Arg Glu Lys Arg Arg Leu Asn Asp Leu Val Leu Glu Asn
 35 40 45
 Lys Leu Ile Ala Leu Gly Glu Glu Asn Ala Thr Leu Lys Ala Glu Leu
 50 55 60
 Leu Ser Leu Lys Leu Lys Phe Gly Leu Ile Ser Ser Thr Ala Tyr Ala
 65 70 75 80
 Gln Glu Ile Gln Lys Leu Ser Asn Ser Thr Ala Val Tyr Phe Gln Asp
 85 90 95
 Tyr Gln Thr Ser Lys Ser Asn Val Ser Ser Phe Val Asp Glu His Glu
 100 105 110
 Pro Ser Met Val Ser Ser Ser Cys Ile Ser Val Ile Lys His Ser Pro
 115 120 125
 Gln Ser Ser Leu Ser Asp Val Ser Glu Val Ser Ser Val Glu His Thr
 130 135 140
 Gln Glu Ser Ser Val Gln Gly Ser Cys Arg Ser Pro Glu Asn Lys Phe
 145 150 155 160
 Gln Ile Ile Lys Gln Glu Pro Met Glu Leu Glu Ser Tyr Thr Arg Glu
 165 170 175

Pro Arg Asp Asp Arg Gly Ser Tyr Thr Ala Ser Ile Tyr Gln Asn Tyr
 180 185 190

Met Gly Asn Ser Phe Ser Gly Tyr Ser His Ser Pro Pro Leu Leu Gln
 195 200 205

Val Asn Arg Ser Ser Ser Asn Ser Pro Arg Thr Ser Glu Thr Asp Asp
 210 215 220

Gly Val Val Gly Lys Ser Ser Asp Gly Glu Asp Glu Gln Gln Val Pro
 225 230 235 240

Lys Gly Pro Ile His Ser Pro Val Glu Leu Lys His Val His Ala Thr
 245 250 255

Val Val Lys Val Pro Glu Val Asn Ser Ser Ala Leu Pro His Lys Leu
 260 265 270

Arg Ile Lys Ala Lys Ala Met Gln Ile Lys
 275 280

<210> 92
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 92
 Met Ala Ser Leu Gly His Ile Leu Val Phe Cys Val Gly Leu Leu Thr
 1 5 10 15

Met Ala Lys Ala Glu Ser Pro Lys Glu His Asp Pro Phe Thr Tyr Asp
 20 25 30

Tyr Gln Ser Leu Gln Ile Gly Gly Leu Val Ile Ala Gly Ile Leu Phe
 35 40 45

Ile Leu Gly Ile Leu Ile Val Leu Ser Arg Arg Cys Arg Cys Lys Phe
 50 55 60

Asn Gln Gln Gln Arg Thr Gly Glu Pro Asp Glu Glu Glu Gly Thr Phe
 65 70 75 80

Arg Ser Ser Ile Arg Arg Leu Ser Thr Arg Arg Arg
 85 90

<210> 93
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 93
 Trp Thr Gly Thr Gly Arg Gly Ala Val Ala Ile Met Ala Asp Pro Asp
 1 5 10 15

Pro Arg Tyr Pro Arg Ser Ser Ile Glu Asp Asp Phe Asn Tyr Gly Ser
 20 25 30

Ser Val Ala Ser Ala Thr Val His Ile Arg Met Ala Phe Leu Arg Lys
 35 40 45

Val Tyr Ser Ile Leu Ser Leu Gln Val Leu Leu Thr Thr Val Thr Ser
 50 55 60

Thr Val Phe Leu Tyr Phe Glu Ser Val Arg Thr Phe Val His Glu Ser
 65 70 75 80

Pro Ala Leu Ile Leu Leu Phe Ala Leu Gly Ser Leu Gly Leu Ile Phe
 85 90 95

Ala Leu Thr Leu Asn Arg His Lys Tyr Pro Leu Asn Leu Tyr Leu Leu
 100 105 110

Phe Gly Phe Thr Leu Leu Glu Ala Leu Thr Val Ala Val Val Val Thr
 115 120 125

Ser Met Met Tyr Ile Leu Ser Ala Ser Phe His Thr
 130 135 140

<210> 94

<400> 94
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<210> 95

<400> 95
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<210> 96

<400> 96
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<210> 97

<211> 51

<212> PRT

<213> Homo sapiens

<400> 97

Phe Phe Pro Leu Leu Leu Pro Leu His Thr Pro Val Ala Gly Arg Asn
 1 5 10 15

Leu Gly Phe Pro Glu Ser Leu Gly Val Pro Pro Phe Leu Pro His Pro
 20 25 30

Gly Gly Thr Pro Arg Ala Pro Gly Leu Phe Leu Leu Leu Phe Ser Phe
 35 40 45

Trp Ala Val
 50

<210> 98
 <211> 53
 <212> PRT
 <213> Homo sapiens

<400> 98
 Phe Phe Leu Tyr Ser Phe Pro Phe Thr Pro Pro Trp Leu Glu Gly Thr
 1 5 10 15
 Ser Ala Ser Leu Lys Ala Trp Gly Ser His Pro Ser Tyr Pro Thr Arg
 20 25 30
 Glu Glu Arg Pro Gly Pro Arg Ala Cys Phe Ser Ser Cys Phe Pro Phe
 35 40 45
 Gly Gln Phe Asp His
 50

<210> 99
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 99
 Pro Leu Asp Cys Ala Thr Phe Val Phe Val Phe Leu Asn Phe Phe Lys
 1 5 10 15
 Pro Arg Met Ile Ser Pro Ala Ser Phe Ser Ser Pro Ser Ser Gln Thr
 20 25 30
 Glu Phe Lys Gly His Phe Ser Ser Ser Phe Trp His Leu Gln Pro Gln
 35 40 45
 Ser Gly Ile Phe
 50

<210> 100
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 100
 Pro Phe Ser Ser Ser Val Ser Phe Phe Gly Thr Ala Pro Ser Cys Leu
 1 5 10 15
 Leu Glu Gly Trp Ile Leu Val Cys Ala Leu Asp Arg Tyr Arg Ile Asn
 20 25 30
 Thr Cys Ala Leu Arg Thr Gly Ser Pro Arg Phe Ile Gln Ser Ala His
 35 40 45
 Tyr Arg Lys Leu Leu Cys Gln Asn Pro Gly Lys Asp Pro Thr Pro Gly
 50 55 60

Ser Pro Ser Ser Leu Leu Thr Ser Thr Arg Ala Val Leu Leu Phe Phe
 65 70 75 80
 Ile Leu Leu Phe Tyr Cys Phe Cys Cys Gly His Tyr His Trp Gln Ser
 85 90 95
 Ser Phe Ser Pro Phe Leu Asp Ile Gly Val Leu Ser Leu Lys Asp Ser
 100 105 110
 Thr Leu Arg Leu Lys Val Pro Lys Ala Ala
 115 120

<210> 101
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 101
 Leu Phe Phe Phe Cys Phe Leu Phe Trp Asp Cys Ala Ile Met Phe Ile
 1 5 10 15
 Arg Arg Leu Asp Phe Gly Val Cys Ser Arg Gln Ile Gln Asn Lys Tyr
 20 25 30
 Leu Arg Leu Glu Asn Arg Lys Ser Thr Ile His Thr Lys Cys Ser Leu
 35 40 45
 Gln Glu Val Ala Val Ser Lys Ser Arg Gln Gly Pro Asn Ser Gly Gln
 50 55 60
 Pro Leu Leu Pro Ala Asp Leu Asn Lys Gly Cys Ala Ile Val Phe Tyr
 65 70 75 80
 Phe Ile Ile Leu Leu Leu Leu Trp Ser Leu Ser Leu Ala Lys Phe
 85 90 95
 Leu Phe Pro Phe Pro Gly His Arg Gly Pro Val Phe Lys Arg Phe His
 100 105 110
 Ser Glu Ala Glu Gly Ala Lys Ser Cys Leu Arg Ser Gly Leu
 115 120 125

<210> 102
 <211> 73
 <212> PRT
 <213> Homo sapiens

<400> 102
 Ile Asp Phe Glu Gly Lys Glu Arg Gly Lys Gly Gln Gly Arg Asp Thr
 1 5 10 15
 Pro Pro Leu Pro Leu Ser Trp Ala Gln Lys Leu Gly Gly Gly Arg Glu
 20 25 30
 Arg Ile Phe Thr Phe Phe Lys Leu Leu Phe Ser Glu Trp Asn Lys Leu
 35 40 45

Gly Gln Gly Ala Gln Ala Leu Ser Ser Val Pro His Thr Pro Leu Leu
 50 55 60

Arg Ser Phe Ile Gln Lys Asn Ile Ser
 65 70

<210> 103
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 103
 Ile Leu Arg Gly Arg Arg Glu Gly Arg Val Arg Val Glu Thr Pro Leu
 1 5 10 15

Pro Cys Pro Phe Pro Gly Pro Arg Ser Trp Gly Glu Gly Gly Lys Gly
 20 25 30

Phe Leu His Phe Leu Asn Cys Tyr Phe Leu Asn Gly Thr Ser Trp Ala
 35 40 45

Lys Gly Pro Arg Pro Cys Pro Leu Ser Leu Thr Pro Leu Cys Ser Val
 50 55 60

His Ser Phe Lys Lys Thr Phe Leu Glu His Leu Leu Cys Pro Ala Tyr
 65 70 75 80

Ala Arg Pro Thr Ser Val Cys Val Gly Gly Leu Tyr Ala Ser Ser Ser
 85 90 95

Val Pro Pro Cys Pro Ser Phe Thr Gly Ala Phe Gly Gly Ser Val Gly
 100 105 110

Gly Gly Thr Phe Cys Gly Val Trp Gly Ser Pro Gly Ser Pro Thr Lys
 115 120 125

Leu Ser Pro Ser Pro Val Pro Thr His Leu Leu Gln Pro Pro Ala
 130 135 140

<210> 104
 <211> 116
 <212> PRT
 <213> Homo sapiens

<400> 104
 Cys Arg Pro Thr Ile Phe Thr Pro Arg Pro Pro Ala Leu Gly Glu Gly
 1 5 10 15

Ser Thr Thr Thr Ser Pro Leu Asp Ile Pro Leu Gly Thr Gly Met Trp
 20 25 30

Val Pro Leu Thr Val Arg Pro Trp Gly Glu Pro Lys Ala Leu Thr Ser
 35 40 45

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | Ala | Met | Leu | Gly | Gly | Gly | Ala | Ser | Glu | Thr | Val | Gly | Arg | Gln |
| 50 | | | | 55 | | | | 60 | | | | | | | |
| Asp | Ile | Leu | Gly | Ala | Ala | Pro | Ser | Gln | Gln | Gly | Ile | Arg | Gln | Gly | Ala |
| 65 | | | | 70 | | | | 75 | | | | 80 | | | |
| Val | Gly | Asp | Gly | Leu | Ala | Gln | Gly | Lys | Gly | Thr | Ala | Trp | Ser | Gly | Phe |
| | | | | 85 | | | | 90 | | | | 95 | | | |
| Leu | Glu | Ile | Pro | Lys | Pro | His | Arg | Arg | Ser | His | Leu | Leu | Gln | Ile | Pro |
| | | | | 100 | | | | 105 | | | | 110 | | | |
| Gln | Arg | His | Arg | | | | | | | | | | | | |
| 115 | | | | | | | | | | | | | | | |

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<210> 105
<211> 22
<212> PRT
<213> Homo sapiens
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<400> 105
Arg Met Gly Lys Glu Ala Leu Met Ser Trp Arg Arg Asp Pro Pro His
  1                      5              10              15

Thr Leu Ser Trp Trp Ala
      20

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<210> 106

<400> 106
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<210> 107

<400> 107
000

<210> 108

<400> 108
000

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<210> 109
<211> 165
<212> PRT
<213> Homo sapiens
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<400> 109
Gly Ala Gly Pro Trp Glu Ala Phe Pro Asp Gly Ile Gly Arg Arg Ser
1 5 10 15
Arg Arg Ala Arg Leu Pro Gln Tyr Lys Arg Pro Pro Gly Gly Gly Gly
20 25 30

Gly Gly Asp Ser Gly Arg Arg Asn Met Ala Val Ala Asp Leu Ala Leu
 35 40 45
 Ile Pro Asp Val Asp Ile Asp Ser Asp Gly Val Phe Lys Tyr Val Leu
 50 55 60
 Ile Arg Val His Ser Ala Pro Arg Ser Gly Ala Pro Ala Ala Glu Ser
 65 70 75 80
 Lys Glu Ile Val Arg Gly Tyr Lys Trp Ala Glu Tyr His Ala Asp Ile
 85 90 95
 Tyr Asp Lys Val Ser Gly Asp Met Gln Lys Gln Gly Cys Asp Cys Glu
 100 105 110
 Cys Leu Gly Gly Gly Arg Ile Ser His Gln Ser Gln Asp Lys Lys Ile
 115 120 125
 His Val Tyr Gly Tyr Ser Met Ala Tyr Gly Pro Ala Gln His Ala Ile
 130 135 140
 Ser Thr Glu Lys Ile Lys Ala Lys Tyr Pro Asp Tyr Glu Val Thr Trp
 145 150 155 160
 Ala Asn Asp Gly Tyr
 165

<210> 110

<400> 110
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<210> 111
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 111
 Pro Ser Ser Pro Ser Leu Pro Val Leu Arg Ala Gly Leu Arg Pro Phe
 1 5 10 15
 Cys Asp Val Leu Pro Gly Cys Gly Cys Val Arg Phe Leu Cys Ser Cys
 20 25 30

Leu

<210> 112
 <211> 31
 <212> PRT
 <213> Homo sapiens

<400> 112
 Glu Thr Cys Ala Gly Ala Gly Arg Cys Ala Ala Asp Gly Gly Asn Gly
 1 5 10 15

Ser Gly Ser Arg Val Pro Pro Ala Ser Arg Cys Cys Ala Leu Gly
 20 25 30

<210> 113
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 113
 Lys Arg Ala Gln Ala Pro Ala Ala Ala Leu Gln Met Ala Glu Met Asp
 1 5 10 15
 Pro Val Ala Glu Phe Pro Gln Pro Pro Gly Ala Ala Arg Trp Ala Glu
 20 25 30
 Ala Leu Leu Arg Cys Phe Thr Trp Leu Arg Leu Cys Gln Ile Ser Met
 35 40 45
 Phe Leu Ser Leu Lys Cys Leu Asn Thr Arg Ser Ser His Leu Gly Ala
 50 55 60
 His Cys Arg
 65

<210> 114
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 114
 Gly Cys Val Ala Gly Ser Ala Gly Leu Ser Arg Lys Ser Pro Trp Thr
 1 5 10 15
 Glu Val Glu Thr Glu Thr Phe Leu Gly Ser Pro Arg Tyr Ser Arg Arg
 20 25 30
 Val Arg Ser Cys Tyr Trp Leu Leu Gly Leu Met Ala Val Arg Ala Ser
 35 40 45
 Phe Glu Asn Asn Cys Glu Ile Gly Cys Phe Ala Lys Leu Thr Asn Thr
 50 55 60
 Tyr Cys Leu Val Ala Ile Gly Gly Ser Glu Asn Phe Tyr Ser Val Phe
 65 70 75 80
 Glu Gly Glu Leu Ser Asp Thr Ile Pro Val Val His Ala Ser Ile Ala
 85 90 95
 Gly Cys Arg Ile Ile Gly Arg Met Cys Val Gly Asn Arg His Gly Leu
 100 105 110
 Leu Val Pro Asn Asn Thr Thr Asp Gln Glu Leu Gln His Ile Arg Asn
 115 120 125

Ser Leu Pro Asp Thr Val Gln Ile Arg Arg Val Glu Glu Arg Leu Ser
 130 135 140
 Ala Leu Gly Asn Val Thr Thr Cys Asn Asp Tyr Val Ala Leu Val His
 145 150 155 160
 Pro Asp Leu Asp Arg Glu Thr Glu Glu Ile Leu Ala Asp Val Leu Lys
 165 170 175
 Val Glu Val Phe Arg Gln Thr Val Ala Asp Gln Val Leu Val Gly Ser
 180 185 190
 Tyr Cys Val Phe Ser Asn Gln Gly Gly Leu Val His Pro Lys Thr Ser
 195 200 205
 Ile Glu Asp Gln Asp Glu Cys Leu Ser Phe Gln Val Pro Cys Cys Gly
 210 215 220
 Asp Val Asn Glu Ala Leu Ser Asp Ser Trp Asp Val Tyr Asn Val Ser
 225 230 235 240
 Phe Val Pro Glu Thr Thr
 245

<210> 115

<400> 115
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<210> 116
 <211> 72
 <212> PRT
 <213> Homo sapiens

<400> 116
 Met Gly Tyr Asn Leu Ser Pro Gln Phe Thr Gln Leu Leu Val Ser Arg
 1 5 10 15
 Tyr Cys Pro Arg Ser Ala Asn Pro Ala Met Gln Leu Asp Arg Phe Ile
 20 25 30
 Gln Val Cys Thr Gln Leu Gln Val Leu Thr Glu Ala Phe Arg Glu Lys
 35 40 45
 Asp Thr Ala Val Gln Gly Asn Ile Arg Leu Ser Phe Glu Asp Phe Val
 50 55 60
 Thr Met Thr Ala Ser Arg Met Leu
 65 70

<210> 117
 <211> 35
 <212> PRT
 <213> Homo sapiens

<400> 117

Glu His Thr His Arg Cys Ser Asp Gln Leu Arg Leu Ala Thr Val Ser
 1 5 10 15

Asn Ser Val Ala Ser Lys Arg Glu Val Tyr Leu Cys Pro Ala Ile Gly
 20 25 30

His Leu Gly
 35

<210> 118

<211> 40

<212> PRT

<213> Homo sapiens

<400> 118

Ala Thr Leu Trp Leu Ala Lys Glu Lys Phe Ile Cys Ala Gln Pro Leu
 1 5 10 15

Val Thr Leu Gly Asp Ala Pro Asp Ser Arg Gln Met Leu Val His Trp
 20 25 30

Pro Ser Ser Ser Phe Leu Leu Lys
 35 40

<210> 119

<211> 33

<212> PRT

<213> Homo sapiens

<400> 119

Gln Lys Arg Ser Leu Phe Val Pro Ser His Trp Ser Pro Trp Val Met
 1 5 10 15

His Gln Ile Ala Gly Arg Cys Trp Phe Ile Gly Leu Arg Pro Leu Ser
 20 25 30

Ser

<210> 120

<211> 161

<212> PRT

<213> Homo sapiens

<400> 120

Leu Ser Ser Ser Arg Ser Phe Ile Ser Thr Ser Trp Gly Ala Phe Val
 1 5 10 15

Phe Phe Cys Leu Leu Ser Cys Gly Ser Leu Val Leu Ala Gly Phe Glu
 20 25 30

Gly Ala Ser Thr Ser Met Ala Val Phe Ser Phe Trp Ala Ser Arg Ile
 35 40 45

Cys Trp Arg Ser Phe Leu Arg Phe Phe Pro Asp Ser Val Met Leu Ala
 50 55 60
 Arg Ala Leu Asp Ala Arg Phe Leu Arg Trp Cys Arg Val Ile Ser Pro
 65 70 75 80
 Trp Ser Ile Thr Ala Pro Thr Thr Arg Cys Leu Arg Arg Arg Ser Arg
 85 90 95
 Phe Asn Thr Arg Arg Arg Leu Asn Ser Phe Phe Phe Ser Ser Val Arg
 100 105 110
 Gly Arg Leu Ile Phe Pro Pro Gly Ala Pro Ile Val Ala Ile Pro Leu
 115 120 125
 Gln Phe Thr Val Arg Thr Ser Ala Gln Arg Arg Ile Arg Gly Leu Arg
 130 135 140
 Pro Gly Leu Pro Arg Ala Asn Arg Asn Ser Gly Ala Gly Pro Arg Ala
 145 150 155 160
 Ile

<210> 121
 <211> 49
 <212> PRT
 <213> Homo sapiens

<400> 121
 Phe Phe Gln Ser Ala Arg Ala Leu Leu Gln Met Glu Leu Thr Ala Arg
 1 5 10 15
 Glu Ala Leu Leu Gln Ser Phe Phe Cys Thr Phe Phe Pro Pro Lys Asp
 20 25 30
 Ile Pro Leu Gly Glu Val Ser Arg Pro Leu Gly Arg Arg Lys Ser Gly
 35 40 45
 Glu

<210> 122
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 122
 Lys Gly Ala Leu Leu Leu Ser Lys Ser Ser Glu Thr Thr Thr Glu Ser
 1 5 10 15
 Glu Gly Trp Leu Gln Leu Arg Ile Phe
 20 25

<210> 123

<211> 25
 <212> PRT
 <213> Homo sapiens

<400> 123
 Trp Lys Arg Phe Ser Ser His Leu Gln Gly Pro Ser Phe Leu His Pro
 1 5 10 15
 Gly Gly Leu Leu Ser Ser Phe Ala Phe
 20 25

<210> 124
 <211> 160
 <212> PRT
 <213> Homo sapiens

<400> 124
 Trp Leu Leu Gln Leu Lys Pro His Leu Leu Ala His His Pro Pro Lys
 1 5 10 15
 Gly Leu Pro His Arg Gly Ala Pro Leu Tyr Ser Pro Arg Thr Arg Pro
 20 25 30
 Arg Val Ala Ile Gly Pro Arg Lys Ala Gly Ala Glu Pro Ala Asp Pro
 35 40 45
 Ala Leu Ser Gly Ser Thr Asp Arg Glu Leu Glu Trp Asn Arg Asp Tyr
 50 55 60
 Gly Ser Ser Gly Gly Lys Asp Gln Pro Ala Pro Asn Gly Ala Glu Glu
 65 70 75 80
 Glu Ala Val Gln Thr Pro Ala Gly Val Glu Ser Gly Ala Ala Ser Glu
 85 90 95
 Ala Pro Gly Gly Arg Gly Cys Asp Arg Pro Arg Ala Asp His Ala Ala
 100 105 110
 Pro Pro Gln Glu Ala Gly Val Gln Cys Thr Cys Gln His Tyr Thr Val
 115 120 125
 Arg Glu Glu Ala Gln Lys Thr Pro Pro Ala Asp Pro Ala Cys Pro Glu
 130 135 140
 Arg Glu Asp Ser His Gly Ser Gly Ser Pro Phe Lys Ala Ser Gln Asp
 145 150 155 160

<210> 125

<400> 125
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<210> 126

<400> 126
000

<210> 127

<400> 127
000

<210> 128
<211> 78
<212> PRT
<213> Homo sapiens

<400> 128
Phe Phe Phe Pro Cys Gln Pro Phe Ile Gly Ser Gly Thr His Glu Val
1 5 10 15
Gln Leu Val Pro Gly Thr Val His Ser Leu Lys Gln Leu Lys Gly Leu
20 25 30
Ser Pro Asp Thr Asp Ala Thr Leu Ser Arg Met His Gly Pro Gly Leu
35 40 45
Thr Leu Ser Met Glu Glu Val Gly Ser Ala Arg Gly Gly Arg Met Val
50 55 60
Ala Arg Asp Thr Glu Ser Leu Val Leu Gly Leu Trp Leu Ser
65 70 75

<210> 129
<211> 109
<212> PRT
<213> Homo sapiens

<400> 129
Cys Ala Leu Leu Pro Pro Thr Pro Ser Arg Thr Glu Pro Ser Leu His
1 5 10 15
Ser Thr Gly Asp Ser Gly Lys Gly Ala Glu Asp Arg Gln Glu Ala His
20 25 30
Arg Asp Arg Pro Thr Gly Ser Gln Ala Ala Pro Glu Glu Arg Asp Ile
35 40 45
Gln Thr Glu Glu Ser Leu Pro Ala Pro His Ser Phe Gln Asp Glu Lys
50 55 60
Asn Leu Pro Pro Pro Pro Asp Thr Asp Ala Arg Glu Val Gly Gly Arg
65 70 75 80
Ser Gly Lys Phe Pro Phe Pro Val Pro Pro Arg Thr Ser Glu Pro Ser
85 90 95
Met Leu Asn Phe Phe Phe Ile Lys Ile Thr Phe Ile Leu
100 105

<210> 130
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 130
 Ser Leu Pro Ala Asp Val Pro Cys Cys Pro Pro Pro His Pro Ala Gln
 1 5 10 15
 Asn His Pro Cys Ile Pro Gln Gly Thr Arg Ala Arg Val Pro Lys Ile
 20 25 30
 Asp Lys Arg His Thr Glu Thr Asp Gln Leu Ala Ala Arg Gln Pro Gln
 35 40 45
 Arg Arg Glu Thr Phe Arg Gln Arg Lys Val Ser Leu Pro Leu Ile Pro
 50 55 60
 Ser Lys Met Arg Lys Thr Cys Arg His Pro Pro Thr Leu Met Pro Gly
 65 70 75 80
 Arg Trp Glu Glu Glu Val Gly Asn Phe Pro Ser Gln Tyr Pro Gln Glu
 85 90 95
 Arg Leu Ser Leu Gln Cys
 100

<210> 131
 <211> 31
 <212> PRT
 <213> Homo sapiens

<400> 131
 Leu Cys Gln Leu Met Cys Pro Val Ala Pro His Pro Ile Pro His Arg
 1 5 10 15
 Thr Ile Pro Ala Phe His Arg Gly Leu Gly Gln Gly Cys Arg Arg
 20 25 30

<210> 132
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 132
 Gly Phe Arg Pro Ala Arg Cys Asp Pro Val Pro Leu Pro Thr Thr Arg
 1 5 10 15
 Ser Val Ala Gly Leu Pro Val Gly Arg Val Arg Gln Leu Ser Arg Pro
 20 25 30
 Leu Leu Gly Pro Asp Thr Gly Ser Val Ala Asn Ile Phe Lys Gly Leu
 35 40 45

Val Ile Leu Pro Glu Met Ser Leu Val Ile Arg Asn Leu Gln Arg Val
 50 55 60

Ile Pro Ile Arg Arg Ala Pro Leu Arg Ser Lys Ile Glu Ile Val Arg
 65 70 75 80

Arg Ile Leu Gly Val Gln Lys Phe Asp Leu Gly Ile Ile Cys Val Asp
 85 90 95

Asn Lys Asn Ile Gln His Ile Asn Arg Ile Tyr Arg Asp Arg Asn Val
 100 105 110

Pro Thr Asp Val Leu Ser Phe Pro Phe His Glu His Leu Lys Ala Gly
 115 120 125

Glu Phe Pro Gln Pro Asp Phe Pro Asp Asp Tyr Asn Leu Gly Asp Ile
 130 135 140

Phe Leu Gly Val Glu Tyr Ile Phe His Gln Cys Arg Glu Asp Glu Asp
 145 150 155 160

Tyr Asn Asp Val Leu Thr
 165

<210> 133

<211> 244

<212> PRT

<213> Homo sapiens

<400> 133

Phe Asp Pro Lys Leu Leu Glu Gly Lys Val Lys Glu Asp Pro Asp Gln
 1 5 10 15

Gly Glu Ser Met Lys Pro Leu Thr Phe Ala Arg Phe Tyr Leu Pro Ile
 20 25 30

Leu Val Pro Ser Ala Lys Lys Ala Ile Tyr Met Asp Asp Asp Val Ile
 35 40 45

Val Gln Gly Asp Ile Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly
 50 55 60

His Ala Ala Ala Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val
 65 70 75 80

Val Ile Arg Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp
 85 90 95

Tyr Lys Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys
 100 105 110

Ser Phe Asn Pro Gly Val Phe Val Ala Asn Leu Thr Glu Trp Lys Arg
 115 120 125

Gln Asn Ile Thr Asn Gln Leu Glu Lys Trp Met Lys Leu Asn Val Glu
 130 135 140

Glu Gly Leu Tyr Ser Arg Thr Leu Ala Gly Ser Ile Thr Thr Pro Pro
 145 150 155 160

Leu Leu Ile Val Phe Tyr Gln Gln His Ser Thr Ile Asp Pro Met Trp
 165 170 175

Asn Val Arg His Leu Gly Ser Ser Ala Gly Lys Arg Tyr Ser Pro Gln
 180 185 190

Phe Val Lys Ala Ala Lys Leu Leu His Trp Asn Gly His Leu Lys Pro
 195 200 205

Trp Gly Arg Thr Ala Ser Tyr Thr Asp Val Trp Glu Lys Trp Tyr Ile
 210 215 220

Pro Asp Pro Thr Gly Lys Phe Asn Leu Ile Arg Arg Tyr Thr Glu Ile
 225 230 235 240

Ser Asn Ile Lys

<210> 134
 <211> 63
 <212> PRT
 <213> Homo sapiens

<400> 134
 Pro Ser Phe Ile Ile His Ser Asn Pro Ile Trp Leu Gly Ala Leu Leu
 1 5 10 15

Trp Val Ser His Cys Pro Ser Ser Ile Leu Gly Ser Leu Arg Pro Arg
 20 25 30

Gly Gly Lys Ile Gln Leu Arg Val Gly Gly Ser Glu Pro Cys Arg Ile
 35 40 45

Met Lys Ala Thr Cys Phe Gly Asn Asp Leu Pro Leu Pro Val Val
 50 55 60

<210> 135
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 135
 Asp Tyr Leu Arg Leu Ser Ser Gly Phe Cys Gln Asn Thr Pro Leu Thr
 1 5 10 15

Glu Ser Thr Glu Gly Met Gly Val Gly Gly Leu Gly Arg Val Arg Leu
 20 25 30

Glu Cys Glu Gly Ser Leu Ile Tyr Ala Glu Leu Lys Ser Pro Ser Leu
 35 40 45

Tyr Val His Thr Phe Val Leu Phe Ser Arg Leu Ile Leu Ala Ile Pro
 50 55 60

Asn Pro Leu Pro Arg
65

<210> 136
<211> 47
<212> PRT
<213> Homo sapiens

<400> 136
Gln Pro Phe Arg Tyr Phe Asn Thr Pro Leu Ser Ile Leu His Phe Pro
1 5 10 15
His Leu Ser Lys Leu Asn Leu Val His Arg Val Gly Leu Cys Met Cys
20 25 30
Met Gln Glu Val Gly Val Asp Ser Ala Leu Gly Trp Asn Pro Pro
35 40 45

<210> 137
<211> 83
<212> PRT
<213> Homo sapiens

<400> 137
Val Pro Pro Cys Pro Gln Leu Arg Glu Leu Cys Pro Gly Val Asn Asn
1 5 10 15
Gln Pro Tyr Leu Cys Glu Ser Gly His Cys Cys Gly Glu Thr Gly Cys
20 25 30
Cys Thr Tyr Tyr Tyr Glu Leu Trp Trp Phe Trp Leu Leu Trp Thr Val
35 40 45
Leu Ile Leu Phe Ser Cys Cys Cys Ala Phe Arg His Arg Arg Ala Lys
50 55 60
Leu Arg Leu Gln Gln Gln Gln Arg His Val Glu Ile Asn Leu Leu Ala
65 70 75 80
Tyr His Gly

<210> 138

<400> 138
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<210> 139
<211> 88
<212> PRT
<213> Homo sapiens

<400> 139

Trp Lys Ser Trp Gln Leu His Arg Met Leu Leu Thr Arg Thr Glu Phe
 1 5 10 15

Trp Tyr Leu Ser Thr Glu Val Ser Thr Met Phe Thr Cys Lys Arg Leu
 20 25 30

Arg Lys Lys Pro Leu Lys Trp Thr Gly Ile Gln Ser Ser Phe Ser Val
 35 40 45

Thr His Gln Ser Asp Lys Arg Leu Val Thr Thr Leu Pro Gly Leu Phe
 50 55 60

Ser Phe Tyr Asn Ser Ser Ser Ile His Asn Asp Phe Val Leu Cys Ser
 65 70 75 80

Ile Phe Phe Asn Pro Leu Ser Ile
 85

<210> 140

<211> 21

<212> PRT

<213> Homo sapiens

<400> 140

Cys Tyr Met His Phe Leu Thr Phe Val Lys Asn Val Thr Ile Val Lys
 1 5 10 15

Lys Cys Thr Lys Met
 20

<210> 141

<211> 58

<212> PRT

<213> Homo sapiens

<400> 141

Met Glu Ile Glu Gln Val His Phe Pro Ala Tyr Arg Gln Leu Tyr Thr
 1 5 10 15

Asp Leu Asn Ile Phe Ser Ser Cys Leu Val Lys Val Lys Glu Lys Gly
 20 25 30

Phe Phe Leu Pro Gln Asp Ile Thr Phe Phe Tyr Ile Thr Ser Ile Thr
 35 40 45

His His Cys Phe Trp Trp Lys Ser Ala Glu
 50 55

<210> 142

<211> 21

<212> PRT

<213> Homo sapiens

<400> 142

Asn Ser Phe Leu Thr Gln Met Met Val Leu Gln Asn Asn Lys Met Ala
 1 5 10 15

Glu His Phe His Lys
 20

<210> 143

<211> 44

<212> PRT

<213> Homo sapiens

<400> 143

Ser Val Thr Lys Ser Gly Phe Leu Ile Pro Cys His Leu Gly Asp Phe
 1 5 10 15

Ile Leu Leu Cys Cys Phe Lys Ile Gln Cys Arg Glu Val Val Asp Cys
 20 25 30

Arg Gly Asn Lys Val Asn Ser Asn Phe Glu Lys Lys
 35 40

<210> 144

<211> 67

<212> PRT

<213> Homo sapiens

<400> 144

Asn Pro Pro Asn Asp Lys Val Ser Glu Ile Gln Thr Ser Leu His Ser
 1 5 10 15

Ile Cys Glu Asn Val Gln Pro Phe Tyr Cys Ser Val Lys Glu Pro Ser
 20 25 30

Ser Gly Ser Lys Met Asn Ser Ile Asn Gln Arg Ile Phe Tyr Thr Leu
 35 40 45

Glu Lys Lys Ile Ser Ser Asn Ile Leu Thr Glu Tyr Cys Lys Leu His
 50 55 60

Phe Ser Ser
 65

<210> 145

<211> 65

<212> PRT

<213> Homo sapiens

<400> 145

Lys Val His Thr Ile Leu His Phe Ser Thr Lys Ser Ser Gly Val Leu
 1 5 10 15

Cys Leu Leu Tyr Lys Lys Lys Leu Tyr Pro Val Ala Gly Lys Thr Leu
 20 25 30

Ser Leu Ser Leu Leu Leu Asn Asn Trp Arg Lys Cys Ser Ser Leu Tyr
 35 40 45

Lys Val Ala Tyr Lys Leu Glu Ser Glu Leu Val Gln Ser Pro Phe Thr
 50 55 60

Phe
 65

<210> 146

<211> 55

<212> PRT

<213> Homo sapiens

<400> 146

Lys Ile Trp Ser Arg Glu Gln Asn His Cys Glu Trp Met Asn Cys Cys
 1 5 10 15

Lys Met Lys Lys Val Gln Ala Lys Leu Leu Gln Val Phe Cys His Phe
 20 25 30

Asp Glu Ser Gln Lys Met Asn Phe Gly Tyr Leu Ser Thr Leu Arg Val
 35 40 45

Phe Ser Leu Ile Phe Cys Met
 50 55

<210> 147

<211> 113

<212> PRT

<213> Homo sapiens

<400> 147

Ile Pro Glu Asp Pro His Ile Asp Glu Ser Lys Ala Lys His Gln Ala
 1 5 10 15

Ile Ile Met Ser Thr Ser Leu Arg Val Ser Pro Ser Ile His Gly Tyr
 20 25 30

His Phe Asp Thr Ala Ser Arg Lys Lys Ala Val Gly Asn Ile Phe Glu
 35 40 45

Asn Thr Asp Gln Glu Ser Leu Glu Arg Leu Phe Arg Asn Ser Gly Asp
 50 55 60

Lys Lys Ala Glu Glu Arg Ala Lys Ile Ile Phe Ala Ile Asp Gln Asp
 65 70 75 80

Val Glu Glu Lys Thr Arg Ala Leu Met Ala Leu Lys Lys Arg Thr Lys
 85 90 95

Asp Lys Leu Phe Gln Phe Leu Lys Leu Arg Lys Tyr Ser Ile Lys Val
 100 105 110

His

<210> 148
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 148
 Met Gln His Phe Ala Ala Thr Leu Gln Ala Ser Leu Leu Ser Gly Leu
 1 5 10 15
 Gln Arg Leu Glu Arg Asp Arg Asp Trp Lys Gly Thr Arg Thr Glu Gln
 20 25 30
 Thr Gly Tyr Lys Asp Ser Lys Gln Phe His Ala Leu Cys Cys Tyr Arg
 35 40 45
 Gly Glu Gln Asn Ala Phe Ser Lys Asp Leu Lys Thr Leu Pro Ser Leu
 50 55 60
 Gln Glu Arg Ile Asp Ala Asp Arg Arg Ala Trp Thr Asp Val Met Arg
 65 70 75 80
 Thr Lys Glu Asn Asp Gly Trp Arg
 85

<210> 149
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 149
 Val Val Glu Gly Pro Asp Cys Gly His His Gly Asp Ala Gly Ala Glu
 1 5 10 15
 Val Pro Arg Cys Leu Trp Pro Arg Ser Gly Ile Cys Gly Arg Glu Cys
 20 25 30
 Gly Leu Gly Asp Arg Trp Phe Leu Arg Val Glu Asp Arg Gln Asp Leu
 35 40 45
 Asn Arg Gln Arg Ile Gln Arg Tyr Ala Gln Ala Phe His Thr Arg Gly
 50 55 60
 Ser Glu Asp Leu Asp Lys Asp Ser Val Glu Lys Leu Glu Leu Gly Cys
 65 70 75 80
 Pro Phe Ser Pro His Leu Ser Leu Pro Met Pro Ser Val Ser Arg Ser
 85 90 95
 Thr Ser Arg Ser Ser Ala Asn Trp Glu Arg Leu Arg Gln Gly Thr Leu
 100 105 110
 Arg Arg Asp Leu Arg Gly Ile Ile Asn Arg Gly Leu Glu Asp Gly Glu
 115 120 125
 Ser Trp Glu Tyr Gln Ile
 130

<210> 150

<400> 150

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<210> 151

<400> 151

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<210> 152

<211> 99

<212> PRT

<213> Homo sapiens

<400> 152

Met Lys Val Ser Ala Ala Leu Leu Cys Leu Leu Leu Ile Ala Ala Thr
1 5 10 15

Phe Ile Pro Gln Gly Leu Ala Gln Pro Asp Ala Ile Asn Ala Pro Val
20 25 30

Thr Cys Cys Tyr Asn Phe Thr Asn Arg Lys Ile Ser Val Gln Arg Leu
35 40 45

Ala Ser Tyr Arg Arg Ile Thr Ser Ser Lys Cys Pro Lys Glu Ala Val
50 55 60

Ile Phe Lys Thr Ile Val Ala Lys Glu Ile Cys Ala Asp Pro Lys Gln
65 70 75 80

Lys Trp Val Gln Asp Ser Met Asp His Leu Asp Lys Gln Thr Gln Thr
85 90 95

Pro Lys Thr

<210> 153

<400> 153

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<210> 154

<211> 52

<212> PRT

<213> Homo sapiens

<400> 154

Val Phe Phe Phe Thr Ala Glu Asn Trp Trp Tyr Phe His Ile His Ser
1 5 10 15

Val Ser Ile Gln Phe Gln Tyr Pro His Leu Met Arg Lys Lys Cys Phe
20 25 30

Thr Asn Glu Gly Gly Ile Leu Lys Leu Ala Val Met Leu Gly Trp Arg
 35 40 45

Lys Phe Gly Ile
 50

<210> 155
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 155
 Phe Phe Phe Leu Leu Gln Lys Ile Gly Gly Ile Phe Thr Phe Ile Val
 1 5 10 15

Phe Leu Ser Asn Phe Ser Thr His Ile
 20 25

<210> 156
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 156
 Ile Ser Cys Asn Val Arg Leu Glu Lys Ile Trp Tyr Leu Gly Tyr Phe
 1 5 10 15

Gln Gly Thr Ile Lys Ser Asp Phe Cys Phe Phe Val Lys Lys Asn Phe
 20 25 30

Phe Asn Gln Tyr Cys Phe Tyr Lys
 35 40

<210> 157
 <211> 66
 <212> PRT
 <213> Homo sapiens

<400> 157
 Asn Ala Asn Tyr Cys Ile His His Lys Leu Lys Lys Arg Thr Cys Ile
 1 5 10 15

Arg Arg Leu Lys Thr Arg Lys Lys Ile Gln His Pro Asn Met Tyr Ser
 20 25 30

Gln Glu Gly Asn Gln Phe Cys Asn Arg Thr Gly Ile Met Asn Tyr Lys
 35 40 45

Gln Glu Gly Val Glu Lys Glu Glu Lys Lys Met Cys Ile Glu Phe Lys
 50 55 60

Thr Leu
 65

<210> 158
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 158
 Pro Cys Cys Glu Val Leu Ala Gly Val Gly Asn Val Trp Lys Cys Ser
 1 5 10 15
 Gln Gln Val Cys Trp Gly Val
 20

<210> 159
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 159
 Pro Ala Val Lys Ser Trp Gln Val Leu Val Met Cys Gly Asn Ala Val
 1 5 10 15
 Ser Lys Phe Ala Gly Glu Phe Asp Lys Ser Ile Lys Gln Asn Lys Lys
 20 25 30
 Ser Leu Gly Ile Ile Leu Phe His Asp Phe Phe Cys Ser Phe Thr Pro
 35 40 45
 Glu Gly Arg Asn Gly Leu Gln Gln Val Val Glu Glu Glu Gly Gly Glu
 50 55 60
 Gln Val Tyr
 65

<210> 160
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 160
 Glu Gly Glu Pro Ala Cys Ser Gly Ile Gln Ala Arg Arg Val Thr Pro
 1 5 10 15
 Cys Pro Ser Pro Arg Asp Ala Ser Pro Ala Pro Ala Ser Glu Thr Ser
 20 25 30
 Leu Ser Val Pro Ala Thr Leu Val Gly Gly Ser Asp Leu Ile His Phe
 35 40 45
 Gln Val Gly Ser Gly Pro Thr Pro Gly Pro Ala Glu Asp Arg Ala Ala
 50 55 60
 Arg Pro Ser Trp Leu Thr Leu Gln Leu Ala Leu Gly Trp Gly Gly Arg
 65 70 75 80

Glu Leu Met Ser Val Ala Ser Leu Ser Trp Gly Phe Pro Ala Cys Pro
 85 90 95

Val Val Ser Cys Pro Arg Cys Tyr Arg Gly Cys Ala
 100 105

<210> 161
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 161
 Phe Cys Ser Thr Thr Ser Ser Val Ala Leu His Gln Lys Glu Gly Met
 1 5 10 15

Gly Tyr Ser Arg
 20

<210> 162
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 162
 Ile Pro Gly Leu Lys Tyr Phe Val Gly Ile Ala Tyr Tyr Ile Ile Leu
 1 5 10 15

Ala Asp Glu Pro Gln Asp Asn Gly Tyr Arg His Thr His Thr Tyr Thr
 20 25 30

His Thr Lys Ser Gln Leu Leu Lys Ser Gly Leu Gly Ile Arg Leu Leu
 35 40 45

Cys Pro Val Lys Asn Ser Cys Thr Glu Val Ile Val Thr
 50 55 60

<210> 163
 <211> 22
 <212> PRT
 <213> Homo sapiens

<400> 163
 Leu Met Asn Leu Arg Thr Thr Ala Thr Asp Thr His Ile His Thr Arg
 1 5 10 15

Thr Gln Asn Leu Ser Cys
 20

<210> 164
 <211> 37
 <212> PRT
 <213> Homo sapiens

<400> 164

Thr Ser Gly Gln Arg Leu Gln Thr His Thr Tyr Ile His Ala His Lys
 1 5 10 15

Ile Ser Ala Val Glu Glu Trp Ala Trp Asn Gln Thr Ser Val Ser Ser
 20 25 30

Lys Lys Leu Leu His
 35

<210> 165

<211> 72

<212> PRT

<213> Homo sapiens

<400> 165

Thr Val Pro Phe Ser Val Ser Ala Ser Gly Phe His Leu Ile Phe Phe
 1 5 10 15

Ala Leu Pro Ile Leu Phe Gln Pro Val Ala Lys Asn His Glu Thr Arg
 20 25 30

Gln Trp Lys His Arg His Arg Arg Arg Gly Pro Ser Cys Ala Leu Lys
 35 40 45

Ala Gly Lys Thr Ala Ser Gly Ala Gly Glu Val Val Arg Cys Leu Ser
 50 55 60

Glu Gln Ser Val Ala Ile Ser Arg
 65 70

<210> 166

<400> 166

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<210> 167

<400> 167

000

<210> 168

<211> 25

<212> PRT

<213> Homo sapiens

<400> 168

Leu Ile Ser Thr Ser Glu Glu Val Leu Thr Phe Ser Met Leu His Arg
 1 5 10 15

Asn Trp Tyr Asn Met Pro Ser Val Tyr
 20 25

<210> 169

<211> 20

<212> PRT

<213> Homo sapiens

<400> 169

Leu Lys Leu Leu Ala Trp Ser Tyr Leu His Ser Phe Cys Val Leu Phe
 1 5 10 15

Ala Ser Cys Ile
 20

<210> 170

<211> 32

<212> PRT

<213> Homo sapiens

<400> 170

Leu Leu Ala Cys Cys Thr Glu Thr Gly Ile Thr Cys Leu Gln Tyr Thr
 1 5 10 15

Asn Thr His Met Leu Ser Phe Val Leu Phe Trp Gln Leu Thr Arg Ser
 20 25 30

<210> 171

<211> 50

<212> PRT

<213> Homo sapiens

<400> 171

Ile Ala Leu Ser Cys Cys Phe Asn Val Val His Thr Ile Ala Ser Gln
 1 5 10 15

Thr Cys Tyr Ser Ser Val Ile Cys Ser Val Val Thr Lys Val Thr Gly
 20 25 30

Leu Val Leu Phe Ala Gln Phe Leu Arg Leu Val Cys Phe Leu His Leu
 35 40 45

Ile Asn
 50

<210> 172

<211> 51

<212> PRT

<213> Homo sapiens

<400> 172

Glu His Tyr Thr Ile Gly Phe Gln Tyr Cys Thr His Lys Ile His Thr
 1 5 10 15

Cys Val Gln Lys Val Ser Ser Ser Arg Leu Val Ile Pro Phe Thr Trp
 20 25 30

Lys Ile Asn Glu Gly Asn Leu Tyr Ile Leu Tyr Lys Asn Lys Ser Lys
 35 40 45

Phe Ile Tyr
 50

<210> 173

<211> 239

<212> PRT

<213> Homo sapiens

<400> 173

Leu Phe Ile His Phe Arg Asn Asn Thr Asn Asn Trp Arg Glu Ile Pro
 1 5 10 15

Glu Asn Leu Met Asp Gln Tyr Ser Glu Val Asn Ala Ile Ser Thr Ala
 20 25 30

Cys Ser Asn Gly Val Pro Glu Cys Glu Glu Met Val Ser Gly Leu Phe
 35 40 45

Lys Gln Trp Met Glu Asn Pro Asn Asn Asn Pro Ile His Pro Asn Leu
 50 55 60

Arg Ser Thr Val Tyr Cys Asn Ala Ile Ala Gln Gly Gly Glu Glu Glu
 65 70 75 80

Trp Asp Phe Ala Trp Glu Gln Phe Arg Asn Ala Thr Leu Val Asn Glu
 85 90 95

Ala Asp Lys Leu Arg Ala Ala Leu Ala Cys Ser Lys Glu Leu Trp Ile
 100 105 110

Leu Asn Arg Tyr Leu Ser Tyr Thr Leu Asn Pro Asp Leu Ile Arg Lys
 115 120 125

Gln Asp Ala Thr Ser Thr Ile Ile Ser Ile Thr Asn Asn Val Ile Gly
 130 135 140

Gln Gly Leu Val Trp Asp Phe Val Gln Ser Asn Trp Lys Lys Leu Phe
 145 150 155 160

Asn Asp Tyr Gly Gly Gly Ser Phe Ser Phe Ser Asn Leu Ile Gln Ala
 165 170 175

Val Thr Arg Arg Phe Ser Thr Glu Tyr Glu Leu Gln Gln Leu Glu Gln
 180 185 190

Phe Lys Lys Asp Asn Glu Glu Thr Gly Phe Gly Ser Gly Thr Arg Ala
 195 200 205

Leu Glu Gln Ala Leu Glu Lys Thr Lys Ala Asn Ile Lys Trp Val Lys
 210 215 220

Glu Asn Lys Glu Val Val Leu Gln Trp Phe Thr Glu Asn Ser Lys
 225 230 235

<210> 174

<400> 174
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<210> 175

<400> 175
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<210> 176

<400> 176
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<400> 181
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<210> 182

<400> 182
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<210> 183

<211> 109

<212> PRT

<213> Homo sapiens

<400> 183

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Tyr Ala Asn Gln Ser Ser Ser Leu Arg Phe Lys Ile Lys Tyr Lys Leu
 1              5              10              15

Leu Cys Phe Ser Thr His Ser Gly Ser Ile Val Pro Glu Pro Asp Cys
      20              25              30

Tyr Phe Phe Ile Leu Asn Ile Ile Phe Pro His Leu Ile Cys Leu Pro
      35              40              45

Leu Ile His Arg His Leu Glu Lys Glu Met Gly Gly Cys Leu Leu Ser
      50              55              60

Leu Ser Leu Cys Phe Val Pro Val Val Arg Leu Ala Ala Ser Val Ala
      65              70              75              80

Arg Trp Ala Trp Leu Glu Pro Trp Val Arg Gln Val Ala Gly Gly Asp
      85              90              95

Arg Glu Arg Leu Arg Gly Lys Trp Trp His Leu Leu Leu
      100              105

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<210> 184

<211> 33

<212> PRT

<213> Homo sapiens

<400> 184

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Ser Leu Phe Leu Ser Ser Thr Gly Val Ser Ala Pro Leu Gln Gly Gln
 1              5              10              15

Ser Lys Ser Leu His Pro Glu Pro Pro Pro Ile Pro Val His Phe Ser
      20              25              30

Arg

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<210> 185

<211> 46

<212> PRT

<213> Homo sapiens

<400> 185

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His Ser Phe Ser Ala Arg Leu Glu Phe Leu His Leu Cys Arg Gly Lys
 1              5              10              15

Val Ser Pro Cys Thr Leu Asn His Pro Pro Phe Leu Phe Ile Ser Ala
      20              25              30

Asp Asn Asp Gly Gly Gly Gly Val Ser Ile Val Leu Arg Val
      35              40              45

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<210> 186

<211> 105
 <212> PRT
 <213> Homo sapiens

<400> 186
 Val Glu Gly Thr Cys Ser Asp Gly Val Phe Ser Gly Phe Leu Ala Pro
 1 5 10 15
 Gly Cys Ala Val His Arg Pro His Arg Pro Trp Pro Gln His Pro Gln
 20 25 30
 Gln Gly Gln Trp Lys Cys Gln Ser Ser Lys Cys His His Phe Pro Leu
 35 40 45
 Ser Leu Ser Leu Ser Pro Pro Ala Thr Cys Leu Thr His Gly Ser Asn
 50 55 60
 Gln Ala His Arg Ala Thr Asp Ala Ala Ser Leu Thr Thr Gly Thr Lys
 65 70 75 80
 Gln Arg Glu Arg Asp Asn Arg His Pro Pro Ile Ser Phe Ser Lys Cys
 85 90 95
 Leu Trp Met Arg Gly Arg Gln Ile Arg
 100 105

<210> 187
 <211> 73
 <212> PRT
 <213> Homo sapiens

<400> 187
 Arg Gly His Ala Val Thr Glu Tyr Leu Val Gly Ser Leu Leu Ala
 1 5 10 15
 Val Gln Phe Thr Gly Pro Thr Gly Leu Gly Pro Ser Ile Pro Ser Arg
 20 25 30
 Asp Ser Gly Ser Val Arg Ala Val Asn Ala Thr Thr Ser Leu Ser Ala
 35 40 45
 Ser Pro Cys Pro Arg Gln Pro Pro Ala Ser Pro Thr Ala Leu Thr Lys
 50 55 60
 Pro Thr Glu Gln Leu Thr Leu Pro Val
 65 70

<210> 188
 <211> 28
 <212> PRT
 <213> Homo sapiens

<400> 188
 Met Phe Phe Ile Phe Phe Met Leu Ser Ile Gln Ala Leu Phe His Gly
 1 5 10 15

Gln Gln Val Ile Phe His Asn Val Asp Phe Pro Lys
 20 25

<210> 189
 <211> 65
 <212> PRT
 <213> Homo sapiens

<400> 189
 Leu Leu Asn Thr Ala Ile Leu Trp Leu Leu Leu Val Phe Leu Trp Tyr
 1 5 10 15

Val Val Trp Glu Cys Leu Trp Asn Tyr Gln Tyr Leu Lys Phe Ser Lys
 20 25 30

Glu Pro Trp Lys Ser Ile Thr Leu Asn Glu Ser Leu Ser Leu Tyr Met
 35 40 45

Asn Tyr Val Leu Lys Phe Asp Gln Leu Ser Leu Arg His Lys Thr Val
 50 55 60

Ile
 65

<210> 190
 <211> 30
 <212> PRT
 <213> Homo sapiens

<400> 190
 Cys Phe Ser Phe Phe Ser Cys Tyr Leu Ser Lys His Cys Ser Met Val
 1 5 10 15

Ser Lys Ser Tyr Phe Ile Met Trp Ile Phe Gln Asn Asn Tyr
 20 25 30

<210> 191
 <211> 41
 <212> PRT
 <213> Homo sapiens

<400> 191
 Phe Phe Phe Phe Val Thr Asn Val Phe Tyr Leu Phe Ile Asn Lys Lys
 1 5 10 15

Cys Ile Val Gln Ala Leu Tyr Pro Asn Pro Ser Thr Gln Lys Lys Ile
 20 25 30

Asn Asn Arg Pro Trp Met Ala Gln Thr
 35 40

<210> 192
 <211> 29
 <212> PRT

<213> Homo sapiens

<400> 192

Tyr Lys Pro Phe Ile Pro Ile Gln Val Leu Arg Lys Arg Leu Thr Thr
1 5 10 15

Asp Pro Gly Trp His Arg His Asn Leu Phe Gly Val Ile
20 25

<210> 193

<211> 33

<212> PRT

<213> Homo sapiens

<400> 193

Ser Ser His Met Val Thr Asn Thr Tyr Asp Phe Ser Phe Arg Asn Ile
1 5 10 15

Ile Arg Arg Leu Asn Leu Leu Leu Gln Gln Gln Lys Phe Asn Pro Leu
20 25 30

Asn

<210> 194

<211> 153

<212> PRT

<213> Homo sapiens

<400> 194

Thr Pro Leu Arg Lys Glu Val Leu Lys Ser Lys Met Gly Lys Ser Glu
1 5 10 15

Lys Ile Ala Leu Pro His Gly Gln Leu Val His Gly Ile His Leu Tyr
20 25 30

Glu Gln Pro Lys Ile Asn Arg Gln Lys Ser Lys Tyr Asn Leu Pro Leu
35 40 45

Thr Lys Ile Thr Ser Ala Lys Arg Asn Glu Asn Asn Phe Trp Gln Asp
50 55 60

Ser Val Ser Ser Asp Arg Ile Gln Lys Gln Glu Lys Lys Pro Phe Lys
65 70 75 80

Asn Thr Glu Asn Ile Lys Asn Ser His Leu Lys Lys Ser Ala Phe Leu
85 90 95

Thr Glu Val Ser Gln Lys Glu Asn Tyr Ala Gly Ala Lys Phe Ser Asp
100 105 110

Pro Pro Ser Pro Ser Val Leu Pro Lys Pro Pro Ser His Trp Met Gly
115 120 125

Ser Thr Val Glu Asn Ser Asn Gln Asn Arg Glu Leu Met Ala Val His
130 135 140

Leu Lys Thr Leu Leu Lys Val Gln Thr
145 150

<210> 195
<211> 304
<212> PRT
<213> Homo sapiens

<400> 195
Ser Leu Tyr Tyr Tyr Gly Ile Arg Asp Leu Ala Thr Val Phe Phe Tyr
1 5 10 15
Met Leu Val Ala Ile Ile Ile His Ala Val Ile Gln Glu Tyr Met Leu
20 25 30
Asp Lys Ile Asn Arg Arg Met His Phe Ser Lys Thr Lys His Ser Lys
35 40 45
Phe Asn Glu Ser Gly Gln Leu Ser Ala Phe Tyr Leu Phe Ala Cys Val
50 55 60
Trp Gly Thr Phe Ile Leu Ile Ser Glu Asn Tyr Ile Ser Asp Pro Thr
65 70 75 80
Ile Leu Trp Arg Ala Tyr Pro His Asn Leu Met Thr Phe Gln Met Lys
85 90 95
Phe Phe Tyr Ile Ser Gln Leu Ala Tyr Trp Leu His Ala Phe Pro Glu
100 105 110
Leu Tyr Phe Gln Lys Thr Lys Lys Glu Asp Ile Pro Arg Gln Leu Val
115 120 125
Tyr Ile Gly Leu Tyr Leu Phe His Ile Ala Gly Ala Tyr Leu Leu Asn
130 135 140
Leu Asn His Leu Gly Leu Val Leu Leu Val Leu His Tyr Phe Val Glu
145 150 155 160
Phe Leu Phe His Ile Ser Arg Leu Phe Tyr Phe Ser Asn Glu Lys Tyr
165 170 175
Gln Lys Gly Phe Ser Leu Trp Ala Val Leu Phe Val Leu Gly Arg Leu
180 185 190
Leu Thr Leu Ile Leu Ser Val Leu Thr Val Gly Phe Gly Leu Ala Arg
195 200 205
Ala Glu Asn Gln Lys Leu Asp Phe Ser Thr Gly Asn Phe Asn Val Leu
210 215 220
Ala Val Arg Ile Ala Val Leu Ala Ser Ile Cys Val Thr Gln Ala Phe
225 230 235 240
Met Met Trp Lys Phe Ile Asn Phe Gln Leu Arg Arg Trp Arg Glu His
245 250 255

Thr Ser Asn Val Ala Asp Ser Pro Arg Asn Lys Lys Glu Lys Ser Ser
290 295 300

<400> 196
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<400> 197
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<400> 198
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<400> 199
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<213> Homo sapiens

Ser Arg Asp Leu Pro Ser His Thr Lys Ile Lys Tyr Arg Gln Thr Thr
35 40 45

Gln Asp Ala Pro Glu Glu Val Arg Asn Arg Asp Phe Arg Arg Glu Leu
 50 55 60
 Glu Glu Arg Glu Arg Ala Ala Ala Arg Glu Lys Asn Arg Asp Arg Pro
 65 70 75 80
 Thr Arg Glu His Thr Thr Ser Ser Ser Val Ser Lys Lys Pro Arg Leu
 85 90 95
 Asp Gln Ile Pro Ala Ala Asn Leu Asp Ala Asp Asp Pro Leu Thr Asp
 100 105 110
 Glu Glu Asp Glu Asp Phe Glu Glu Glu Ser Asp Asp Asp Asp Thr Ala
 115 120 125
 Ala Leu Leu Ala Glu Leu Glu Lys Ile Lys Lys Glu Arg Ala Glu Lys
 130 135 140
 Gly Gln Gly Pro Gly Lys Gly Pro Arg Ala Lys Lys Ala Leu Arg Gly
 145 150 155 160
 Gly Arg Val Ser Phe Trp Glu Asn Ile Gly Trp Ala Gly Asn Pro Phe
 165 170 175
 Pro Leu Ile Leu Ser Leu Ala His Ser Lys Leu Lys Ala Asp Phe Glu
 180 185 190
 Lys Phe Glu Arg Arg Val
 195

<210> 202
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 202
 Val Leu Ile Phe Leu Val Phe Leu Leu Asp Gly Lys Ala Val Gly Ile
 1 5 10 15
 Asn Arg Gly Gln Arg Leu Met Leu Glu Trp Pro Val Glu Val Val Glu
 20 25 30
 Gln Ser Ser His Leu Leu Ser Gly Ala Val Ser Gly Trp Val Tyr Leu
 35 40 45
 Lys Ala Thr Lys Cys Phe Gly
 50 55

<210> 203
 <211> 66
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES

<222> (14)

<223> Any naturally occurring amino acid

<400> 203

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 20 25 30
 Leu Pro Ala Ala Cys Ile Gln Gly Gln Ser Ser Gly Leu Gln Thr Gly
 35 40 45
 Leu Val Pro Pro Pro Leu Gln Gly Met Gly Val Gly Glu Gly Ala Phe
 50 55 60
 Lys Lys
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<210> 204

<211> 161

<212> PRT

<213> Homo sapiens

<400> 204

His Leu Gly Tyr Gly Lys Leu Leu Trp Cys Val Val Gly Phe Leu Phe
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 Pro Phe Pro Ser Pro Leu Ala Lys Leu Gly Pro His Pro His Val Ile
 35 40 45
 Leu Leu Gly Arg Arg Leu Pro His Leu Val Cys Arg Gln His Ala Ser
 50 55 60
 Lys Ala Arg Ala Gln Ala Cys Arg Leu Gly Trp Cys Leu Leu Arg Phe
 65 70 75 80
 Arg Val Trp Glu Leu Val Lys Gly Leu Ser Lys Asn Asn Lys Lys Lys
 85 90 95
 Lys Val Lys Ser Leu Val Ala Ser Ile His Ser Asp Pro Gly Arg Gln
 100 105 110
 Gln Gly Phe Val Asp Leu Asp Ser Leu Gly Met Ser Ser Cys Gln Pro
 115 120 125
 Gly Gln Asp Pro Gly Leu Pro Arg Ala Glu Ala Leu Pro Ala Thr Arg
 130 135 140
 Ile Pro Pro Leu Trp Gly Leu Cys Val Gln Arg Ser Gly Ser Glu Thr
 145 150 155 160
 Ser

<210> 205
 <211> 37
 <212> PRT
 <213> Homo sapiens

<400> 205
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 Lys Leu Gln Leu Leu
 35

<210> 206
 <211> 32
 <212> PRT
 <213> Homo sapiens

<400> 206
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 Val Gln Ser Ser Ala Arg Pro Phe Pro Ser Leu Met Ser Ala Leu Gly
 20 25 30

<210> 207
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 207
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 Asn Thr Thr Thr Ser Thr Pro Asn Glu His Gly Thr Cys Leu Phe Leu
 20 25 30
 Pro Leu Leu Ile Tyr Ser Arg Phe Ser Ser Val Phe Phe Ser Asn Ala
 35 40 45
 Ala Phe Ser Cys Ser Ser Gly Leu Leu Ser Gly Ser Ile Val Ala Lys
 50 55 60
 Asp Ser Ile Arg Ser Thr Leu His Ser Asp Val Lys His Ser His Cys
 65 70 75 80
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 85 90 95
 Ser Val Leu Thr Asp Glu
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<210> 208
 <211> 34
 <212> PRT
 <213> Homo sapiens

<400> 208
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 20 25 30

Asn Pro

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 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 209
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 Val Gln Trp His Asp Leu Gly Ser Leu Gln Pro
 35 40

<210> 210
 <211> 204
 <212> PRT
 <213> Homo sapiens

<400> 210
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 20 25 30
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 35 40 45
 Lys Gly His Ala His Lys Ala Thr Glu Ala Leu Lys Lys Met Tyr Met
 50 55 60
 Glu Phe Pro Gln Leu Tyr Asn Asn Ser Val Val Cys Ser Phe Leu Pro
 65 70 75 80
 Glu Val Ile Tyr Lys Met Arg Gln Thr Asp Arg Asp Val Ile Thr Ala
 85 90 95

Leu Thr His Arg Pro Trp Ser Leu Ser His Thr Gly Asp Gly Lys Pro
 100 105 110
 Arg Tyr Asp Thr Phe Trp Lys His Phe Ile Phe Val Met Met Asp Ile
 115 120 125
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 130 135 140
 Ser Ala Phe Leu Met Gln Lys Asp Phe Val Ser Pro Ala Tyr Leu Lys
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 Lys Trp Ser Ala Lys Gly Ile Gln Val Val Gly Trp Thr Val Asn Thr
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<210> 211

<400> 211
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<210> 212

<400> 212
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<210> 213

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<210> 214

<211> 33

<212> PRT

<213> Homo sapiens

<400> 214

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 1 5 10 15

Gly Ser Phe Ser Phe Ser Glu Glu Lys Ile Gly Met Gly Tyr Arg Thr
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Ile

<210> 215

<211> 61

<212> PRT

<213> Homo sapiens

<400> 215

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Ser Val Ser Ser Ser Pro Leu Gly Ile Tyr Ser Leu Tyr Val Asn Lys
 20 25 30

Ile Arg Ser Ser Asp Ser Leu Ile Gln Ser Ser Ser Phe Ser Ser Leu
 35 40 45

Phe Leu Cys Arg Leu Leu Asp Ile Tyr Cys Ser Thr Thr
 50 55 60

<210> 216

<211> 24

<212> PRT

<213> Homo sapiens

<400> 216

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Gly Val Gly Gly Arg Gly Asn Phe
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<210> 217

<211> 1880

<212> DNA

<213> Homo sapiens

<400> 217

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<210> 218

<211> 1024

<212> DNA

<213> Homo sapiens

<400> 218

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<210> 219

<211> 2383

<212> DNA

<213> Homo sapiens

<400> 219

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<210> 220

<211> 3209

<212> DNA

<213> Homo sapiens

<400> 220

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<210> 221

<211> 1030

<212> DNA

<213> Homo sapiens

<400> 221

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<210> 222
 <211> 1216
 <212> DNA
 <213> Homo sapiens

<400> 222
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 <212> DNA
 <213> Homo sapiens

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<210> 224
 <211> 849
 <212> DNA
 <213> Homo sapiens

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<210> 225
 <211> 1502
 <212> DNA
 <213> Homo sapiens

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<400> 225
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<210> 226

<211> 1892

<212> DNA

<213> Homo sapiens

<400> 226

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<210> 227
 <211> 1522
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (745)
 <223> a, t, c or g

<400> 227
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<210> 228
 <211> 2016
 <212> DNA
 <213> Homo sapiens

<400> 228
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<210> 229

<211> 765

<212> DNA

<213> Homo sapiens

<400> 229

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<210> 230

<211> 1611

<212> DNA

<213> Homo sapiens

<400> 230

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<210> 231

<211> 1473

<212> DNA

<213> Homo sapiens

<400> 231

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<210> 232

<211> 2503

<212> DNA

<213> Homo sapiens

<400> 232

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<210> 233

<211> 1756

<212> DNA

<213> Homo sapiens

<400> 233

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<210> 234

<211> 1286

<212> DNA

<213> Homo sapiens

<400> 234

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<210> 235

<211> 1230

<212> DNA

<213> Homo sapiens

<400> 235

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<210> 236

<211> 2328

<212> DNA

<213> Homo sapiens

<400> 236

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<210> 237

<211> 1767

<212> DNA

<213> Homo sapiens

<400> 237

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| tacctccata | attgttctaa | tcttcttccc | actgtttaca | aattaccagt | taattaactc | 660 |
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<212> DNA

<213> Homo sapiens

<400> 238

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<210> 239

<211> 1772

<212> DNA

<213> Homo sapiens

<400> 239

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<210> 240

<211> 2409

<212> DNA

<213> Homo sapiens

<400> 240

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<210> 241

<211> 2594

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (2561)

<223> a, t, c or g

<400> 241

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<210> 242

<211> 1012

<212> DNA

<213> Homo sapiens

<400> 242

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<210> 243

<211> 1206

<212> DNA

<213> Homo sapiens

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<223> a, t, c or g

<400> 243

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<210> 244

<211> 2514

<212> DNA

<213> Homo sapiens

<400> 244

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| cgtggatttc | tcaagtcggg | actgcataat | taaagcagtt | gcagttttat | tttttttaca | 2400 |
| gcttttttcc | caaaaatgat | ttgtagttgt | gtgtgcagca | cttcgccctg | atatgtgtgc | 2460 |
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<210> 245

<211> 3903

<212> DNA

<213> Homo sapiens

<400> 245

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| cgatgctgct | tctacacggc | ggggacggtg | tccctgctcc | tgctggtgac | cagcgctcacg | 120 |
| ctgctggttg | ccggggtcct | ccagaaggct | gtagaccaga | gtatcgagaa | gaaaattgtg | 180 |
| ttaaggaatg | gtactgaggc | atgtgactcc | tgggagaagc | cccctctgcc | tgtgtatact | 240 |
| cagttctatt | tcttcaatgt | caccaatcca | gaggagatcc | tcagagggga | gacccctcgg | 300 |
| gtggaagaag | tggggccata | cacctacagg | gaactcagaa | acaaagcaaa | tattcaatth | 360 |
| ggagataatg | gaacaacaat | atctgctggt | agcaacaagg | cctatgtttt | tgaacgagac | 420 |
| caatctgttg | gagaccctaa | aattgactta | attagaacat | taaatattcc | tgtattgact | 480 |
| gtcatagagt | ggccccagg | gcacttcctc | aggagatca | tcgaggccat | gttgaaagcc | 540 |
| tatcagcaga | agctctttgt | gactcacaca | gttgacgaat | tgctctgggg | ctacaaagat | 600 |
| gaaatcttgt | cccttatcca | tgttttcagg | cccgatatct | ctccctatth | tggcctattc | 660 |
| tatgagaaaa | atgggactaa | tgatggagac | tatgtttttc | taactggaga | agacagttac | 720 |
| cttaacttta | caaaaattgt | ggaatggaat | gggaaaacgt | cacttgactg | gtggataaca | 780 |
| gacaagtgca | atatgattaa | tggaaacagat | ggagattctt | ttcaccctct | aataacccaa | 840 |
| gatgagggtc | tttatgtctt | cccatctgac | ttttgcagg | cagtgtatat | tactttcagt | 900 |
| gactatgaga | gtgtacagg | actgcctgcc | tttcggtata | aagtctctgc | agaaatatta | 960 |
| gccaatacgt | cagacaatgc | cggcttctgt | atacctgagg | gaaactgcct | gggctcagga | 1020 |
| gttctgaatg | tcagcatctg | caagaatggt | gcaccatca | ttatgtctth | cccacactth | 1080 |
| taccaagcag | atgagagggt | tgtttctgcc | atagaaggca | tgaccccaaa | tcaggaagac | 1140 |
| catgagacat | ttgtggacat | taatcctttg | actggaataa | tcctaaaagc | agccaagagg | 1200 |
| ttccaaatca | acatttatgt | caaaaaatta | gatgactttg | ttgaaacggg | agacattaga | 1260 |
| accatggttt | tcccagtgat | gtacctcaat | gagagtgttc | acattgataa | agagacggcg | 1320 |
| agtcgactga | agtctatgat | taacactact | ttgatcatca | ccaacatacc | ctacatcatc | 1380 |
| atggcgctgg | gtgtgttctt | tggtttggtt | tttacctggc | ttgcatgcaa | aggacaggga | 1440 |
| tccatggatg | agggaacagc | ggatgaaaga | gcaccctca | ttcgaacctc | aacattgcct | 1500 |
| ttgcttggtg | aagaaaactgt | gtgagctgtc | ctgacctgga | cgatgacgtg | gggaaaccct | 1560 |
| ccacctcctt | gcaggcttgt | tgctgtttga | aagaaggaaa | aagacacggc | gctggcaagt | 1620 |
| gataggaaca | ttctggccag | aggttaaaaga | gcaggctgac | atggctggcc | attaagctth | 1680 |
| ataaaatcat | gtgggctctg | aaattgttct | ttatgtgtgc | tagcaagtat | ttaataaacc | 1740 |
| cttgatatagt | aaaaaaaaaag | ttgttggttg | ctggtagctc | cagaatthttg | tgaccactat | 1800 |
| tgtgggtaaa | atgtctctgc | atcacttgtt | aatgctactg | gtctaacttc | attcagtatg | 1860 |
| cttcattcac | cgaactttgt | gctcaaaatg | cgtatatacc | atthttatgt | gtattcctcc | 1920 |
| atthcacttg | caaaacagaa | gtaaaataaga | gttcgggacc | cagggtaaaa | tggtagcttc | 1980 |
| atccaatata | tcattcaaat | gcattctgatt | tctaaaacat | attacattht | atgctgatct | 2040 |
| tcagttcata | attcttccag | gaaaactcag | tcttccaact | gcaataaaat | actgggtaga | 2100 |
| atcaaatggg | aaagggttg | ggtggggcaa | tacctatgag | ttgatagtga | taagctccta | 2160 |
| aggattthta | acttgtactt | ttgtgaacga | agagaatgca | taaataatgt | tggtaggat | 2220 |
| aaagtacaga | tatttcatgt | agaattcaatt | gctagttatg | atgcttggtg | atagtttaact | 2280 |
| gtthttthtt | tagtcaaaat | gatcatgcta | cgaaggatg | cttctgagag | aatgtaatga | 2340 |
| gtaactgatt | tttcttctct | agtcgccctt | gccaaatatg | ttactgtatt | aattaatcta | 2400 |
| atattgagtg | attatthtga | aaattatgaa | tatgggaaat | ccatctatct | acagcctaag | 2460 |
| ttacacataa | gtttcagaaa | gtctgattag | actaaagaga | tatttcttct | gggacagcct | 2520 |
| tcttcttggt | aattthtgaag | ttctthttac | aagttccttc | ctcagthtca | gttctthtca | 2580 |
| gtgtthttga | gctcactgtc | actcactgaa | tagagaaacg | tgtgccctat | acttctctgt | 2640 |
| acaatcattt | tgctgacaga | atgatggatg | tttaaaatat | tgcacaaagt | actthtaaga | 2700 |
| aaggctctgt | aggaccagaa | gcagagacac | cactthttcaa | aggacttctt | ggtthtcagca | 2760 |

| | | | | | | |
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| taacctaaga | caggggaattg | ggagccatca | tatgtcacag | tgttcagaat | tcaagcatat | 2820 |
| ttaagggcat | tttctttgat | tctcaaagtt | cagcattcat | tttgaattga | gaagcctata | 2880 |
| catttagctg | acaaagtgtc | tatagaattt | cttaacaact | gaaccattca | aaaggatttt | 2940 |
| ttttgtttaa | aactggattt | caatgtaagc | aaatgaagaa | aaaatataga | tttcatttcc | 3000 |
| atagcttctt | atccctgtat | tgaggtaata | aattgtttta | ctgacaattt | ttcctttttc | 3060 |
| tacactaaaa | caatatgtga | tatatattcc | ctcttgaaga | ggcaattcat | taaactctca | 3120 |
| aattttctat | agaatcaaga | tagaaccttt | agatactcca | actcaccaaa | atgtaaaaaa | 3180 |
| actaacaaaa | atatttgggtc | ttcaataatg | ctaaatatct | acattttttag | aatttatcaa | 3240 |
| catttaacta | gataattggg | catgtcttaa | ttatgcatgt | acttatccat | actaataaaa | 3300 |
| ttgacaatgc | tagtgcatat | ttattgggtt | agtcctatta | tcaggatata | atcatctgtg | 3360 |
| aggaggatat | tttaaatact | gtaaatgata | acagttaatg | atatacacat | ttagactgag | 3420 |
| ttgcacactg | gcagggagac | caaaaacatt | acttccatac | ttgtgtcatg | attctttttt | 3480 |
| ttttgagaga | gtctcactct | gtcgccaggg | tgggagtaca | gtggcatgat | ctcgggtcac | 3540 |
| tgcaacctct | gccaccccag | gtccaagtga | ttcttctgcc | tcagtctccc | gagtagctgg | 3600 |
| gactacaggg | accacagagc | atgcctgggt | aatttatgta | tttttagtag | agacgggggt | 3660 |
| tcaccatgtt | ggccaagctg | gtctcaaaact | cctgacctca | agtgatccac | ccacctcagc | 3720 |
| ctgtcgaagt | gctgggatta | caggtgtgag | ccactgcgcc | caccttctat | tttcatcttc | 3780 |
| tttttaagga | attaattatt | tgaatatggc | aaacatccac | atggggccta | aagtcaaata | 3840 |
| atgtaaagcg | atacatataa | agggctttac | ttcccacctc | tttaggtctt | aattcagtca | 3900 |
| ggt | | | | | | 3903 |

<210> 246

<211> 1730

<212> DNA

<213> Homo sapiens

<400> 246

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| cattcggcag | ctaagaatgg | agcaacaggg | gtggagtgg | acattgagtt | tacttcggac | 120 |
| gggattcctg | tcttaatgca | cgataacaca | gtagatagga | cgactgatgg | gactgggcga | 180 |
| ttgtgtgatt | tgacatttga | acaaattagg | aagctgaatc | ctgcagcaaa | ccacagactc | 240 |
| aggaatgatt | tccttgatga | aaagatccct | accctaaggg | aagctgttgc | agagtgccta | 300 |
| aaccataacc | tcacaatctt | ctttgatgtc | aaaggccatg | cacacaaggc | tactgaggct | 360 |
| ctaaagaaaa | tgtatatgga | atttcctcaa | ctgtataata | atagtgtggg | ctgttctttc | 420 |
| ttgccagaag | ttatctacaa | gatgagacaa | acagatcggg | atgtaataac | agcattaact | 480 |
| cacagaccct | ggagcctaag | ccatacagga | gatgggaaac | cacgctatga | tactttctgg | 540 |
| aaacatttta | tatttgttat | gatggacatt | ttgctcgatt | ggagcatgca | taatattctg | 600 |
| tggtacctgt | gtggaatttc | agctttcctc | atgcaaaagg | attttgtatc | cccggcctac | 660 |
| ttgaagaagt | ggtcagctaa | aggaatccag | ggtgttggtt | ggactgttaa | tacctttgat | 720 |
| gaaaagagtt | actacgaatc | ccatcttggg | tccagctata | tactgacag | catggtagaa | 780 |
| gactgcgaac | ctcacttcta | gactttcacg | gtgggacgaa | acgggttcag | aaactgccag | 840 |
| gggcctcata | cagggatatc | aaaataccct | ttgtgctagc | ccaggccctg | gggaatcagg | 900 |
| tgactcacac | aaatgcaata | gttggtcact | gcattttttac | ctgaaccaaa | gctaaaccgg | 960 |
| gtgttgccac | catgcaccat | ggcatgccag | agttcaacac | tggtgtctct | gaaaatctgg | 1020 |
| gtctgaaaaa | acgcacaaga | gcccctgccc | tgccctagct | gaggcacaca | gggagaccca | 1080 |
| gtgaggataa | gcacagattg | aattgtacaa | tttgcatagc | cagatgtaaa | tgcatgggac | 1140 |
| atgcatgata | actcagagtt | gacattttta | aacttgccac | acttatttca | aatatttgta | 1200 |
| ctcagctatg | ttaacatgta | ctgtagacat | caaacttgtg | gccatactaa | taaaattatt | 1260 |
| aaaaggagca | ctaaaggaaa | actgtgtgcc | aagcatcata | tcctaaggca | tacggaattt | 1320 |
| ggggaagcca | ccatgcaatc | cagtgaggct | tcagtgtaca | gcaacaaaaa | tggtagggag | 1380 |
| gtcttgaagc | caatgaggga | tttatagcat | cttgaataga | gagctgcaaa | ccaccagggg | 1440 |
| gcagagttgc | acttttccag | gcttttttag | aagctctgca | acagatgtga | tctgatcata | 1500 |
| ggcaattaga | actggaagaa | acttccaaaa | agatctaggg | gtatgctcat | ggtgcaaagt | 1560 |
| gggggaacta | aactcttagg | ggagaagagg | gggtgaccgg | caaaagagac | gagattagag | 1620 |
| ggaacgagag | ggggaagccg | gagagtccag | gaaataagga | ggtgaagaaa | gaagggttgt | 1680 |
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<210> 247
 <211> 3439
 <212> DNA
 <213> Homo sapiens

<400> 247
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 aaccctgtTg atgagtatca gatattTtaa gctatctTtc aaactattca aaatcgtaat 300
 cctgtgtTgg atcaggcact gactcacggT cttaatgaag aacaaagaaa acagttacag 360
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<210> 248

<211> 377

<212> PRT

<213> Homo sapiens

<400> 248

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Ala Ser Ala Cys Leu Asp Glu Leu Ser Cys Glu Phe Leu Leu Ala Gly
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Ala Gly Gly Ala Gly Ala Gly Ala Ala Pro Gly Pro His Leu Pro Pro
      35              40              45

Arg Gly Ser Val Pro Gly Asp Pro Val Arg Ile His Cys Asn Ile Thr
      50              55              60

Glu Ser Tyr Pro Ala Val Pro Pro Ile Trp Ser Val Glu Ser Asp Asp
      65              70              75              80

Pro Asn Leu Ala Ala Val Leu Glu Arg Leu Val Asp Ile Lys Lys Gly
      85              90              95

Asn Thr Leu Leu Leu Gln His Leu Lys Arg Ile Ile Ser Asp Leu Cys
      100             105             110

Lys Leu Tyr Asn Leu Pro Gln His Pro Asp Val Glu Met Leu Asp Gln
      115             120             125

Pro Leu Pro Ala Glu Gln Cys Thr Gln Glu Asp Val Ser Ser Glu Asp
      130             135             140

Glu Asp Glu Glu Met Pro Glu Asp Thr Glu Asp Leu Asp His Tyr Glu
      145             150             155             160

Met Lys Glu Glu Glu Pro Ala Glu Gly Lys Lys Ser Glu Asp Asp Gly
      165             170             175

Ile Gly Lys Glu Asn Leu Ala Ile Leu Glu Lys Ile Lys Lys Asn Gln
      180             185             190

Arg Gln Asp Tyr Leu Asn Gly Ala Val Ser Gly Ser Val Gln Ala Thr
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Asp Arg Leu Met Lys Glu Leu Arg Asp Ile Tyr Arg Ser Gln Ser Phe
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Lys Gly Gly Asn Tyr Ala Val Glu Leu Val Asn Asp Ser Leu Tyr Asp
 225 230 235 240
 Trp Asn Val Lys Leu Leu Lys Val Asp Gln Asp Ser Ala Leu His Asn
 245 250 255
 Asp Leu Gln Ile Leu Lys Glu Lys Glu Gly Ala Asp Phe Ile Leu Leu
 260 265 270
 Asn Phe Ser Phe Lys Asp Asn Phe Pro Phe Asp Pro Pro Phe Val Arg
 275 280 285
 Val Val Ser Pro Val Leu Ser Gly Gly Tyr Val Leu Gly Gly Gly Ala
 290 295 300
 Ile Cys Met Glu Leu Leu Thr Lys Gln Gly Trp Ser Ser Ala Tyr Ser
 305 310 315 320
 Ile Glu Ser Val Ile Met Gln Ile Ser Ala Thr Leu Val Lys Gly Lys
 325 330 335
 Ala Arg Val Gln Phe Gly Ala Asn Lys Ser Gln Tyr Ser Leu Thr Arg
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 Ala Gln Gln Ser Tyr Lys Ser Leu Val Gln Ile His Glu Lys Asn Gly
 355 360 365
 Trp Tyr Thr Pro Pro Lys Glu Asp Gly
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<210> 249
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 249
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 35 40 45
 Glu Ile Ala Val Gln Asn Pro Leu Val Ser Glu Arg Leu Glu Leu Ser
 50 55 60
 Val Leu Tyr Lys Glu Tyr Ala Glu Asp Asp Asn Ile Tyr Gln Gln Lys
 65 70 75 80
 Ile Lys Asp Leu His Lys Lys Tyr Ser Tyr Ile Arg Lys Thr Arg Pro
 85 90 95
 Asp Gly Asn Cys Phe Tyr Arg Ala Phe Gly Phe Ser His Leu Glu Ala
 100 105 110

Leu Leu Asp Asp Ser Lys Glu Leu Gln Arg Phe Lys Ala Val Ser Ala
 115 120 125

Lys Ser Lys Glu Asp Leu Val Ser Gln Gly Phe Thr Glu Phe Thr Ile
 130 135 140

Glu Asp Phe His Asn Thr Phe Met Asp Leu Ile Glu Gln Val Glu Lys
 145 150 155 160

Gln Thr Ser Val Ala Asp Leu Leu Ala Ser Phe Asn Asp Gln Ser Thr
 165 170 175

Ser Asp Tyr Leu Val Val Tyr Leu Arg Leu Leu Thr Ser Gly Tyr Leu
 180 185 190

Gln Arg Glu Ser Lys Phe Phe Glu His Phe Ile Glu Gly Gly Arg Thr
 195 200 205

Val Lys Glu Phe Cys Gln Gln Glu Val Glu Pro Met Cys Lys Glu Ser
 210 215 220

Asp His Ile His Ile Ile Ala Leu Ala Gln Ala Leu Ser Val Ser Ile
 225 230 235 240

Gln Val Glu Tyr Met Asp Arg Gly Glu Gly Gly Thr Thr Asn Pro His
 245 250 255

Ile Phe Pro Glu Gly Ser Glu Pro Lys Val Tyr Leu Leu Tyr Arg Pro
 260 265 270

Gly His Tyr Asp Ile Leu Tyr Lys
 275 280

<210> 250

<211> 244

<212> PRT

<213> Homo sapiens

<400> 250

Asp His Leu Gln Pro Gln Lys Asn Leu Cys Thr Cys Leu Ala Pro Gly
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 20 25 30

Glu Asp Ile Val Val Ser Arg Pro Val Glu Lys Val Asp Leu Gly Leu
 35 40 45

Gly Ala Leu Arg Glu Asp Val Arg Ile Gly Gly Ala Ala Leu Ala Ala
 50 55 60

Val His Val Leu His Leu Asp Gly His Ala Glu Gly Leu Gly Gln Arg
 65 70 75 80

Asn Asp Val Asp Val Val Ala Leu Leu Ala His Gly Leu His Leu Leu
 85 90 95

Leu Ala Glu Leu Leu Asp Ser Pro Ser Thr Leu Asp Glu Val Leu Glu
 100 105 110
 Glu Leu Ala Leu Ala Leu Gln Val Ala Arg Gly Glu Gln Pro Gln Val
 115 120 125
 Asp His Lys Val Val Gly Gly Ala Leu Val Ile Glu Gly Gly Gln Gln
 130 135 140
 Val Gly Asp Arg Gly Leu Leu Leu His Leu Leu Asn Gln Val His Glu
 145 150 155 160
 Arg Val Val Glu Ile Leu Asn Cys Glu Phe Ser Glu Ala Leu Gly His
 165 170 175
 Gln Val Phe Leu Ala Leu Gly Arg His Ser Leu Glu Pro Leu Gln Leu
 180 185 190
 Leu Ala Val Ile Gln Gln Cys Leu Gln Val Gly Glu Ser Glu Ser Pro
 195 200 205
 Ile Glu Thr Val Ala Val Arg Pro Gly Leu Ala Asp Val Arg Val Leu
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 Ile Leu Leu Val

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 <213> Homo sapiens

<400> 251
 Met Leu Ala Ala Arg Leu Val Cys Leu Arg Thr Leu Pro Ser Arg Val
 1 5 10 15
 Phe His Pro Ala Phe Thr Lys Ala Ser Pro Val Val Lys Asn Ser Ile
 20 25 30
 Thr Lys Asn Gln Trp Leu Leu Thr Pro Ser Arg Glu Tyr Ala Thr Lys
 35 40 45
 Thr Arg Ile Gly Ile Arg Arg Gly Arg Thr Gly Gln Glu Leu Lys Glu
 50 55 60
 Ala Ala Leu Glu Pro Ser Met Glu Lys Ile Phe Lys Ile Asp Gln Met
 65 70 75 80
 Gly Arg Trp Phe Val Ala Gly Gly Ala Ala Val Gly Leu Gly Ala Leu
 85 90 95
 Cys Tyr Tyr Gly Leu Gly Leu Ser Asn Glu Ile Gly Ala Ile Glu Lys
 100 105 110

Ala Val Ile Trp Pro Gln Tyr Val Lys Asp Arg Ile His Ser Thr Tyr
 115 120 125

Met Tyr Leu Ala Gly Ser Ile Gly Leu Thr Ala Leu Ser Ala Ile Ala
 130 135 140

Ile Ser Arg Thr Pro Val Leu Met Asn Phe Met Met Arg Gly Ser Trp
 145 150 155 160

Val Thr Ile Gly Val Thr Phe Ala Ala Met Val Gly Ala Gly Met Leu
 165 170 175

Val Arg Ser Ile Pro Tyr Asp Gln Ser Pro Gly Pro Lys His Leu Ala
 180 185 190

Trp Leu Leu His Ser Gly Val Met Gly Ala Val Val Ala Pro Leu Thr
 195 200 205

Ile Leu Gly Gly Pro Leu Leu Ile Arg Ala Ala Trp Tyr Thr Ala Gly
 210 215 220

Ile Val Gly Gly Leu Ser Thr Val Ala Met Cys Ala Pro Ser Glu Lys
 225 230 235 240

Phe Leu Asn Met Gly Ala Pro Leu Gly Val Gly Leu Gly Leu Val Phe
 245 250 255

Val Ser Ser Leu Gly Ser Met Phe Leu Pro Pro Thr Thr Arg Gly Trp
 260 265 270

Cys His Ser Leu Leu Ser Gly Asn Val Arg Trp Ile Ser Ser Phe Gln
 275 280 285

His Val Pro Ser Val
 290

<210> 252
 <211> 563
 <212> PRT
 <213> Homo sapiens

<400> 252
 Met Glu Arg Glu Leu Asn His Glu Lys Glu Arg Cys Asp Gln Leu Gln
 1 5 10 15

Ala Glu Gln Lys Gly Leu Thr Glu Val Thr Gln Ser Leu Lys Met Glu
 20 25 30

Asn Glu Glu Phe Lys Lys Arg Phe Ser Asp Ala Thr Ser Lys Ala His
 35 40 45

Gln Leu Glu Glu Asp Ile Val Ser Val Thr His Lys Ala Ile Glu Lys
 50 55 60

Glu Thr Glu Leu Asp Ser Leu Lys Asp Lys Leu Lys Lys Ala Gln His
 65 70 75 80

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Arg | Glu | Gln | Leu | Glu | Cys | Gln | Leu | Lys | Thr | Glu | Lys | Asp | Glu | Lys | 85 | 90 | 95 |
| Glu | Leu | Tyr | Lys | Val | His | Leu | Lys | Asn | Thr | Glu | Ile | Glu | Asn | Thr | Lys | 100 | 105 | 110 |
| Leu | Met | Ser | Glu | Val | Gln | Thr | Leu | Lys | Asn | Leu | Asp | Gly | Asn | Lys | Glu | 115 | 120 | 125 |
| Ser | Val | Ile | Thr | His | Phe | Lys | Glu | Glu | Ile | Gly | Arg | Leu | Gln | Leu | Cys | 130 | 135 | 140 |
| Leu | Ala | Glu | Lys | Glu | Asn | Leu | Gln | Arg | Thr | Phe | Leu | Leu | Thr | Thr | Ser | 145 | 150 | 155 |
| Ser | Lys | Glu | Asp | Thr | Cys | Phe | Leu | Lys | Glu | Gln | Leu | Arg | Lys | Ala | Glu | 165 | 170 | 175 |
| Glu | Gln | Val | Gln | Ala | Thr | Arg | Gln | Glu | Val | Val | Phe | Leu | Ala | Lys | Glu | 180 | 185 | 190 |
| Leu | Ser | Asp | Ala | Val | Asn | Val | Arg | Asp | Arg | Thr | Met | Ala | Asp | Leu | His | 195 | 200 | 205 |
| Thr | Ala | Arg | Leu | Glu | Asn | Glu | Lys | Val | Lys | Lys | Gln | Leu | Ala | Asp | Ala | 210 | 215 | 220 |
| Val | Ala | Glu | Leu | Lys | Leu | Asn | Ala | Met | Lys | Lys | Asp | Gln | Asp | Lys | Thr | 225 | 230 | 235 |
| Asp | Thr | Leu | Glu | His | Glu | Leu | Arg | Arg | Glu | Val | Glu | Asp | Leu | Lys | Leu | 245 | 250 | 255 |
| Arg | Leu | Gln | Met | Ala | Ala | Asp | His | Tyr | Lys | Glu | Lys | Phe | Lys | Glu | Cys | 260 | 265 | 270 |
| Gln | Arg | Leu | Gln | Lys | Gln | Ile | Asn | Lys | Leu | Ser | Asp | Gln | Ser | Ala | Asn | 275 | 280 | 285 |
| Asn | Asn | Asn | Val | Phe | Thr | Lys | Lys | Thr | Gly | Asn | Gln | Gln | Lys | Val | Asn | 290 | 295 | 300 |
| Asp | Ala | Ser | Val | Asn | Thr | Asp | Pro | Ala | Thr | Ser | Ala | Ser | Thr | Val | Asp | 305 | 310 | 315 |
| Val | Lys | Pro | Ser | Pro | Ser | Ala | Ala | Glu | Ala | Asp | Phe | Asp | Ile | Val | Thr | 325 | 330 | 335 |
| Lys | Gly | Gln | Val | Cys | Glu | Met | Thr | Lys | Glu | Ile | Ala | Asp | Lys | Thr | Glu | 340 | 345 | 350 |
| Lys | Tyr | Asn | Lys | Cys | Lys | Gln | Leu | Leu | Gln | Asp | Glu | Lys | Ala | Lys | Cys | 355 | 360 | 365 |
| Asn | Lys | Tyr | Ala | Asp | Glu | Leu | Ala | Lys | Met | Glu | Leu | Lys | Trp | Lys | Glu | 370 | 375 | 380 |

Gln Val Lys Ile Ala Glu Asn Val Lys Leu Glu Leu Ala Glu Val Gln
 385 390 395 400
 Asp Asn Tyr Lys Glu Leu Lys Arg Ser Leu Glu Asn Pro Ala Glu Arg
 405 410 415
 Lys Met Glu Asp Gly Ala Asp Gly Ala Phe Tyr Pro Asp Glu Ile Gln
 420 425 430
 Arg Pro Pro Val Arg Val Pro Ser Trp Gly Leu Glu Asp Asn Val Val
 435 440 445
 Cys Ser Gln Pro Ala Arg Asn Phe Ser Arg Pro Asp Gly Leu Glu Asp
 450 455 460
 Ser Glu Asp Ser Lys Glu Asp Glu Asn Val Pro Thr Ala Pro Asp Pro
 465 470 475 480
 Pro Ser Gln His Leu Arg Gly His Gly Thr Gly Phe Cys Phe Asp Ser
 485 490 495
 Ser Phe Asp Val His Lys Lys Cys Pro Leu Cys Glu Leu Met Phe Pro
 500 505 510
 Pro Asn Tyr Asp Gln Ser Lys Phe Glu Glu His Val Glu Ser His Trp
 515 520 525
 Lys Val Cys Pro Met Cys Ser Glu Gln Phe Pro Pro Asp Tyr Asp Gln
 530 535 540
 Gln Val Phe Glu Arg His Val Gln Thr His Phe Asp Gln Asn Val Leu
 545 550 555 560
 Asn Phe Asp

<210> 253
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 253
 Trp Thr Gly Thr Gly Arg Gly Ala Val Ala Ile Met Ala Asp Pro Asp
 1 5 10 15
 Pro Arg Tyr Pro Arg Ser Ser Ile Glu Asp Asp Phe Asn Tyr Gly Ser
 20 25 30
 Ser Val Ala Ser Ala Thr Val His Ile Arg Met Ala Phe Leu Arg Lys
 35 40 45
 Val Tyr Ser Ile Leu Ser Leu Gln Val Leu Leu Thr Thr Val Thr Ser
 50 55 60
 Thr Val Phe Leu Tyr Phe Glu Ser Val Arg Thr Phe Val His Glu Ser
 65 70 75 80

Pro Ala Leu Ile Leu Leu Phe Ala Leu Gly Ser Leu Gly Leu Ile Phe
 85 90 95
 Ala Leu Thr Leu Asn Arg His Lys Tyr Pro Leu Asn Leu Tyr Leu Leu
 100 105 110
 Phe Gly Phe Thr Leu Leu Glu Ala Leu Thr Val Ala Val Val Val Thr
 115 120 125
 Phe Tyr Asp Val Tyr Ile Ile Leu Gln Ala Phe Ile Leu Thr Thr Thr
 130 135 140
 Val Phe Phe Gly Leu Thr Val Tyr Thr Leu Gln Ser Lys Lys Asp Phe
 145 150 155 160
 Ser Lys Phe Gly Ala Gly Leu Phe Ala Leu Leu Trp Ile Leu Cys Leu
 165 170 175
 Ser Gly Phe Leu Lys Phe Phe Phe Tyr Ser Glu Ile Met Glu Leu Val
 180 185 190
 Leu Ala Ala Ala Gly Ala Leu Leu Phe Cys Gly Phe Ile Ile Tyr Asp
 195 200 205
 Thr His Ser Leu Met His Lys Leu Ser Pro Glu Glu Tyr Val Leu Ala
 210 215 220
 Ala Ile Ser Leu Tyr Leu Asp Ile Ile Asn Leu Phe Leu His Leu Leu
 225 230 235 240
 Arg Phe Leu Glu Ala Val Asn Lys Lys
 245

<210> 254
 <211> 151
 <212> PRT
 <213> Homo sapiens

<400> 254
 Arg Lys Lys Gly Glu Thr Glu Arg Glu Leu Ser Ala Ser Thr Gln Thr
 1 5 10 15
 Leu Ser His Leu Gln Gly His Leu Pro Ser Trp Pro Arg Pro Ala Pro
 20 25 30
 Thr Val Thr Ser Ala Ser Arg Arg Phe Ile Ile Lys Lys Asn Gln Lys
 35 40 45
 Gln Ser Gln Asn Gln Asn Lys Ile Gln Lys Glu Lys Thr Trp Gly Asn
 50 55 60
 Gly Met Arg Lys Arg Gly Gly Glu Glu Gly Arg Arg Ala Gly Leu Trp
 65 70 75 80
 Met His Asn Ser Arg Ala Arg Gly Leu Gly Arg Lys Ile Pro Gln Arg
 85 90 95

Pro Ala Ala Cys Val Ala Leu Ala Arg His Val Val Phe Gly Gly Arg
 100 105 110

Leu Pro Ile His Pro Val Glu Ile Leu Val Ala Gly Leu Leu Gly Gly
 115 120 125

Val Lys Pro Val Ser Asp Arg Gln Ala Gly Lys Gly Leu Gly Asp Gly
 130 135 140

Gly Cys Gly Arg Glu Arg Val
 145 150

<210> 255

<211> 150

<212> PRT

<213> Homo sapiens

<400> 255

Arg His Ala Gly Gly Gly Ala Leu Gly Asn Leu Pro Pro Gln Pro Pro
 1 5 10 15

Gly Ser Gly Val Met His Pro Glu Thr Cys Pro Ser Thr Phe Leu Ala
 20 25 30

Ser Pro Leu Pro His Ser Ile Ala Pro Gly Leu Phe Leu Leu Asp Phe
 35 40 45

Val Leu Val Leu Ala Leu Phe Leu Ile Phe Phe Tyr Tyr Glu Ser Pro
 50 55 60

Gly Arg Arg Gly Asp Ser Gly Ser Trp Pro Gly Pro Gly Arg Gln Val
 65 70 75 80

Ala Leu Glu Met Gly Lys Cys Leu Cys Arg Gly Ala Glu Leu Ser Leu
 85 90 95

Cys Phe Ser Phe Phe Pro Leu Leu Leu Pro Leu His Thr Pro Val Ala
 100 105 110

Gly Arg Asn Leu Gly Phe Pro Glu Ser Leu Gly Val Pro Pro Phe Leu
 115 120 125

Pro His Pro Gly Gly Thr Pro Arg Ala Pro Gly Leu Phe Leu Leu Leu
 130 135 140

Phe Ser Phe Trp Ala Val
 145 150

<210> 256

<211> 275

<212> PRT

<213> Homo sapiens

<400> 256

Gly Arg Pro Gly Gln Ser Pro Ala Gly Ala Glu Glu Pro Gly Pro Arg
 1 5 10 15

Asp Ser Ser Ala Val Ile Thr Gln Ile Ser Lys Glu Glu Ala Arg Gly
 20 25 30
 Pro Leu Arg Gly Lys Gly Asp Gln Lys Ser Ala Ala Ser Gln Lys Pro
 35 40 45
 Arg Ser Arg Gly Ile Leu His Ser Leu Phe Cys Cys Val Cys Arg Asp
 50 55 60
 Asp Gly Glu Ala Leu Pro Ala His Ser Gly Ala Pro Leu Leu Val Glu
 65 70 75 80
 Glu Asn Gly Ala Ile Pro Lys Thr Pro Val Gln Tyr Leu Leu Pro Glu
 85 90 95
 Ala Lys Ala Gln Asp Ser Asp Lys Ile Cys Val Val Ile Asp Leu Asp
 100 105 110
 Glu Thr Leu Val His Ser Ser Phe Lys Pro Val Asn Asn Ala Asp Phe
 115 120 125
 Ile Ile Pro Val Glu Ile Asp Gly Val Val His Gln Val Tyr Val Leu
 130 135 140
 Lys Arg Pro His Val Asp Glu Phe Leu Gln Arg Met Gly Glu Leu Phe
 145 150 155 160
 Glu Cys Val Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp Pro Val
 165 170 175
 Ala Asp Leu Leu Asp Lys Trp Gly Ala Phe Arg Ala Arg Leu Phe Arg
 180 185 190
 Glu Ser Cys Val Phe His Arg Gly Asn Tyr Val Lys Asp Leu Ser Arg
 195 200 205
 Leu Gly Arg Asp Leu Arg Arg Val Leu Ile Leu Asp Asn Ser Pro Ala
 210 215 220
 Ser Tyr Val Phe His Pro Asp Asn Ala Val Pro Val Ala Ser Trp Phe
 225 230 235 240
 Asp Asn Met Ser Asp Thr Glu Leu His Asp Leu Leu Pro Phe Phe Glu
 245 250 255
 Gln Leu Ser Arg Val Asp Asp Val Tyr Ser Val Leu Arg Gln Pro Arg
 260 265 270
 Pro Gly Ser
 275

<210> 257

<211> 138

<212> PRT

<213> Homo sapiens

<400> 257

Met Phe Tyr Leu Ala Ala Val Ser Asp Phe Tyr Val Pro Val Ser
 1 5 10 15
 Glu Met Pro Glu His Lys Ile Gln Ser Ser Gly Gly Pro Leu Gln Ile
 20 25 30
 Thr Met Lys Met Val Pro Lys Leu Leu Ser Pro Leu Val Lys Asp Trp
 35 40 45
 Ala Pro Lys Ala Phe Ile Ile Ser Phe Lys Leu Glu Thr Asp Pro Ala
 50 55 60
 Ile Val Ile Asn Arg Ala Arg Lys Ala Leu Glu Ile Tyr Gln His Gln
 65 70 75 80
 Val Val Val Ala Asn Ile Leu Glu Ser Arg Gln Ser Phe Val Phe Ile
 85 90 95
 Val Thr Lys Asp Ser Glu Thr Lys Leu Leu Leu Ser Glu Glu Glu Ile
 100 105 110
 Glu Lys Gly Val Glu Ile Glu Glu Lys Ile Val Asp Asn Leu Gln Ser
 115 120 125
 Arg His Thr Ala Phe Ile Gly Asp Arg Asn
 130 135

<210> 258

<211> 237

<212> PRT

<213> Homo sapiens

<400> 258

Pro Tyr Arg Gln Gly Cys Pro Gly Ala Ala Gly Gln Ala Pro Gly Ala
 1 5 10 15
 Pro Pro Gly Ser Tyr Tyr Pro Gly Leu Pro Ser Gly Thr Pro Gly Gly
 20 25 30
 Pro Tyr Gly Gly Ala Ala Pro Gly Gly Pro Tyr Gly Gln Pro Pro Pro
 35 40 45
 Ser Ser Tyr Gly Ala Gln Gln Pro Gly Leu Tyr Gly Gln Gly Gly Ala
 50 55 60
 Pro Pro Asn Val Asp Pro Glu Ala Tyr Ser Trp Phe Gln Ser Val Asp
 65 70 75 80
 Ser Asp His Ser Gly Tyr Ile Ser Met Lys Glu Leu Lys Gln Ala Leu
 85 90 95
 Val Asn Cys Asn Trp Ser Ser Phe Asn Asp Glu Thr Cys Leu Met Met
 100 105 110
 Ile Asn Met Phe Asp Lys Thr Lys Ser Gly Arg Ile Asp Val Tyr Gly
 115 120 125

Phe Ser Ala Leu Trp Lys Phe Ile Gln Gln Trp Lys Asn Leu Phe Gln
 130 135 140
 Gln Tyr Asp Arg Asp Arg Ser Gly Ser Ile Ser Tyr Thr Glu Leu Gln
 145 150 155 160
 Gln Ala Leu Ser Gln Met Gly Tyr Asn Leu Ser Pro Gln Phe Thr Gln
 165 170 175
 Leu Leu Val Ser Arg Tyr Cys Pro Arg Ser Ala Asn Pro Ala Met Gln
 180 185 190
 Leu Asp Arg Phe Ile Gln Val Cys Thr Gln Leu Gln Val Leu Thr Glu
 195 200 205
 Ala Phe Arg Glu Lys Asp Thr Ala Val Gln Gly Asn Ile Arg Leu Ser
 210 215 220
 Phe Glu Asp Phe Val Thr Met Thr Ala Ser Arg Met Leu
 225 230 235

<210> 259
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 259
 Thr Asn Ile Cys Leu Leu Ser Gly Ala Ser Pro Lys Val Thr Asn Gly
 1 5 10 15
 Trp Ala Gln Ile Asn Phe Ser Phe Ala Ser His Arg Val Ala His Cys
 20 25 30
 Gly Lys Pro Glu Leu Val Arg Thr Pro Val Cys Val Phe Leu Ile His
 35 40 45
 Thr Asn His Asn Lys Gln Val Cys Thr His Leu Tyr Glu Pro His Ala
 50 55 60
 Lys Thr Arg His Ser Gln Arg Ser Val Thr Arg Val Gln Gln Arg Asn
 65 70 75 80
 Ser Arg Phe Asp Gln Asn Arg Pro Cys Cys Leu Leu Asn Cys Gln Leu
 85 90 95
 Pro Leu Lys Asn Leu Gln Lys Lys Gly His Tyr Lys Asn Ser
 100 105 110

<210> 260
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 260
 Phe Val Lys Ile Leu Lys Phe Gly Pro Leu Arg Ile Ile Leu Asn Glu
 1 5 10 15

Ile Tyr Arg Leu Thr Cys Glu Asn Ile Phe His Arg Leu Ser Leu Gly
 20 25 30

Leu Phe Ile Arg Lys Leu Phe Val Cys Pro Pro Val Gly Thr Phe Gly
 35 40 45

Tyr Leu Ile Leu Pro Phe Gln Ile Val Lys Ala His Arg Gly Val Phe
 50 55 60

Trp Asn His Leu Leu Ser His Phe Leu Lys Ser Tyr Ser Ile Val Ser
 65 70 75 80

Val Asn Ile

<210> 261
 <211> 196
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (65)
 <223> Any naturally occurring amino acid

<220>
 <221> MOD_RES
 <222> (165)
 <223> Any naturally occurring amino acid

<400> 261
 Pro Gln Thr Thr Gln Cys Val Arg Arg Ala Gly Leu Trp Val Asn Ser
 1 5 10 15

His Ile His Thr Gln Gly Arg Gly Lys His Thr Gln Val Gln Ser Ser
 20 25 30

Gln Trp Cys Arg Pro Asp Leu Leu Ser Arg Gly Cys Tyr Gly Cys Pro
 35 40 45

Ser Ala Ser Pro Glu Gln Pro Gly Gln Pro Ala Pro Pro Pro Arg Leu
 50 55 60

Xaa Gln Glu Gly Glu Leu Cys Pro Gly Glu Glu Thr Asp Arg Leu Gly
 65 70 75 80

Asp Lys Thr Pro Ile Ala Gly Thr Cys Thr Ala Ala Ala Thr Ala Pro
 85 90 95

Arg Thr Gly His Gly Asp Gly Thr Gly Arg Glu Pro His Cys Pro Leu
 100 105 110

Ser Val Cys Leu Trp Phe Cys Pro Gly Pro Ala His Leu Glu Pro Arg
 115 120 125

Gln Thr Gly Gly Ile Glu Gln Gly Pro Gly Pro Asp Ser Pro Leu Ala
 130 135 140
 Arg Cys Asp Trp Lys Arg Leu Met Pro Gly Gln His Gln Ala Phe Cys
 145 150 155 160
 Lys Ser Gln Ser Gln Cys Ala Glu Ser Ala Ser Thr Ala Cys Ala Val
 165 170 175
 Ala Pro Gln Asp Glu Val Thr Ser Arg Thr Gly Gly Phe Met Gln Thr
 180 185 190
 His Arg His Cys
 195

<210> 262

<211> 190

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (165)

<223> Any naturally occurring amino acid

<400> 262

Asp Gln Leu Gly Ser Gly Gly His Phe Ser Leu His Arg Leu Pro Glu
 1 5 10 15
 Gln Thr Glu Glu Ser Ser Leu Ile Val Ala Glu Pro Ser Leu Ser Pro
 20 25 30
 Ser Ala Val Ser Val Cys Leu His Lys Pro Ser Cys Pro Gly Arg Asp
 35 40 45
 Phe Ile Leu Arg Ser His Ser Thr Gly Arg Ala Gly Thr Phe Cys Thr
 50 55 60
 Leu Ala Leu Gly Leu Ala Glu Gly Leu Val Leu Pro Trp His Gln Pro
 65 70 75 80
 Leu Pro Val Thr Ser Gly Gln Arg Ala Val Trp Thr Trp Ala Leu Leu
 85 90 95
 Asn Ala Thr Cys Leu Pro Gly Leu Gln Val Gly Arg Thr Arg Thr Glu
 100 105 110
 Pro Gln Ala His Thr Glu Gly Ala Val Trp Leu Pro Ala Cys Pro Ile
 115 120 125
 Pro Met Pro Arg Pro Arg Gly Cys Gly Cys Cys Cys Ala Cys Pro Cys
 130 135 140
 Asp Gly Ser Leu Val Ser Gln Pro Val Ser Phe Leu Pro Arg Ala Glu
 145 150 155 160

Leu Pro Phe Leu Xaa Glu Ser Gly Arg Arg Cys Arg Leu Ser Trp Leu
165 170 175

Leu Trp Gly Ser Arg Gly Thr Ala Ile Thr Pro Pro Gly Gln
180 185 190

<210> 263

<211> 244

<212> PRT

<213> Homo sapiens

<400> 263

Glu Lys Met Glu Ala Phe Gly Glu Gly Ala Gly Trp Glu Asp Phe Phe
1 5 10 15

Ser Thr Gln Thr Leu Thr Phe Gln Ser Ile Leu Gln Met Lys Asn Ala
20 25 30

Asp Tyr Phe Ser Asn Tyr Val Thr Glu Asp Phe Thr Thr Tyr Ile Asn
35 40 45

Arg Lys Arg Lys Asn Asn Cys His Gly Asn His Ile Glu Met Gln Ala
50 55 60

Met Ala Glu Met Tyr Asn Arg Pro Val Glu Val Tyr Gln Tyr Ser Thr
65 70 75 80

Glu Pro Ile Asn Thr Phe His Gly Ile His Gln Asn Glu Asp Glu Pro
85 90 95

Ile Arg Val Ser Tyr His Arg Asn Ile His Tyr Asn Ser Val Val Asn
100 105 110

Pro Asn Lys Ala Thr Ile Gly Val Gly Leu Gly Leu Pro Ser Phe Lys
115 120 125

Pro Gly Phe Ala Glu Gln Ser Leu Met Lys Asn Ala Ile Lys Thr Ser
130 135 140

Glu Glu Ser Trp Ile Glu Gln Gln Met Leu Glu Asp Lys Lys Arg Ala
145 150 155 160

Thr Asp Trp Glu Ala Thr Asn Glu Ala Ile Glu Glu Gln Val Ala Arg
165 170 175

Glu Ser Tyr Leu Gln Trp Leu Arg Asp Gln Glu Lys Gln Ala Arg Gln
180 185 190

Val Arg Gly Pro Ser Gln Pro Arg Lys Ala Ser Ala Thr Cys Ser Ser
195 200 205

Ala Thr Ala Ala Ala Ser Ser Gly Leu Glu Glu Trp Thr Ser Arg Ser
210 215 220

Pro Arg Gln Gly Val Gln Pro Arg His Leu Ser Thr Leu Ser Cys Met
225 230 235 240

Leu Asn Trp Ala

<210> 264
 <211> 220
 <212> PRT
 <213> Homo sapiens

<400> 264
 Gly Phe Arg Pro Ala Arg Cys Asp Pro Val Pro Leu Pro Thr Thr Arg
 1 5 10 15
 Ser Val Ala Gly Leu Pro Val Gly Arg Val Arg Gln Leu Ser Arg Pro
 20 25 30
 Leu Leu Gly Pro Asp Thr Gly Ser Val Ala Asn Ile Phe Lys Gly Leu
 35 40 45
 Val Ile Leu Pro Glu Met Ser Leu Val Ile Arg Asn Leu Gln Arg Val
 50 55 60
 Ile Pro Ile Arg Arg Ala Pro Leu Arg Ser Lys Ile Glu Ile Val Arg
 65 70 75 80
 Arg Ile Leu Gly Val Gln Lys Phe Asp Leu Gly Ile Ile Cys Val Asp
 85 90 95
 Asn Lys Asn Ile Gln His Ile Asn Arg Ile Tyr Arg Asp Arg Asn Val
 100 105 110
 Pro Thr Asp Val Leu Ser Phe Pro Phe His Glu His Leu Lys Ala Gly
 115 120 125
 Glu Phe Pro Gln Pro Asp Phe Pro Asp Asp Tyr Asn Leu Gly Asp Ile
 130 135 140
 Phe Leu Gly Val Glu Tyr Ile Phe His Gln Cys Lys Glu Asn Glu Asp
 145 150 155 160
 Tyr Asn Asp Val Leu Thr Val Thr Ala Thr His Gly Leu Cys His Leu
 165 170 175
 Leu Gly Phe Thr His Gly Thr Glu Ala Glu Trp Gln Gln Met Phe Gln
 180 185 190
 Lys Glu Lys Ala Val Leu Asp Glu Leu Gly Arg Arg Thr Gly Thr Arg
 195 200 205
 Leu Gln Ala Leu Thr Arg Gly Leu Phe Gly Gly Ser
 210 215 220

<210> 265
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 265

Phe Phe Phe Leu Arg Ser Phe Val Ile Tyr Leu Cys Ala Thr Pro Ala
 1 5 10 15
 Pro Arg Ser Leu His Pro Ser Arg Val Pro Leu Ser Glu Gly Thr Arg
 20 25 30
 Pro Ser Ala Pro Ser Glu Glu Ala Pro Gly Gln Gly Leu Gln Pro Gly
 35 40 45
 Pro Arg Ala Ser Ala Gln Leu Val Gln His Arg Leu Leu Leu Leu Glu
 50 55 60
 His Leu Leu Pro Leu Cys Leu Arg Ala Val Cys Glu Ser Gln Gln Val
 65 70 75 80
 Thr Glu Ser Val Gly Gly Arg His Ser Gln Asp Val Ile Val Ile Phe
 85 90 95
 Ile Phe Phe Thr Leu Met Glu Asp Ile Leu His Ser
 100 105

<210> 266

<211> 371

<212> PRT

<213> Homo sapiens

<400> 266

Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val Ala
 1 5 10 15
 Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser Ser Leu
 20 25 30
 Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro Gln Pro Ile
 35 40 45
 Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp Gly Arg Gln Glu
 50 55 60
 Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp Arg Leu Gly Gly Ala
 65 70 75 80
 Ile Ala Ala Ile Asn Ser Ile Gln His Asn Thr Arg Ser Asn Val Ile
 85 90 95
 Phe Tyr Ile Val Thr Leu Asn Asn Thr Ala Asp His Leu Arg Ser Trp
 100 105 110
 Leu Asn Ser Asp Ser Leu Lys Ser Ile Arg Tyr Lys Ile Val Asn Phe
 115 120 125
 Asp Pro Lys Leu Leu Glu Gly Lys Val Lys Glu Asp Pro Asp Gln Gly
 130 135 140
 Glu Ser Met Lys Pro Leu Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu
 145 150 155 160

Val Pro Ser Ala Lys Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val
 165 170 175
 Gln Gly Asp Ile Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His
 180 185 190
 Ala Ala Ala Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val
 195 200 205
 Ile Arg Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr
 210 215 220
 Lys Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser
 225 230 235 240
 Phe Asn Pro Gly Val Phe Val Ala Asn Leu Thr Glu Trp Lys Arg Gln
 245 250 255
 Asn Ile Thr Asn Gln Leu Glu Lys Trp Met Lys Leu Asn Val Glu Glu
 260 265 270
 Gly Leu Tyr Ser Arg Thr Leu Ala Gly Ser Ile Thr Thr Pro Pro Leu
 275 280 285
 Leu Ile Val Phe Tyr Gln Gln His Ser Thr Ile Asp Pro Met Trp Asn
 290 295 300
 Val Arg His Leu Gly Ser Ser Ala Gly Lys Arg Tyr Ser Pro Gln Phe
 305 310 315 320
 Val Lys Ala Ala Lys Leu Leu His Trp Asn Gly His Leu Lys Pro Trp
 325 330 335
 Gly Arg Thr Ala Ser Tyr Thr Asp Val Trp Glu Lys Trp Tyr Ile Pro
 340 345 350
 Asp Pro Thr Gly Lys Phe Asn Leu Ile Arg Arg Tyr Thr Glu Ile Ser
 355 360 365
 Asn Ile Lys
 370

<210> 267

<211> 72

<212> PRT

<213> Homo sapiens

<400> 267

Met Cys Leu Leu Ser Gln Gln Ser Pro Ala Ala Ser Ser Leu Glu Gly
 1 5 10 15
 Ala Ile Trp Arg Arg Ala Gly Thr Gln Thr Arg Ala Leu Asp Ala Ile
 20 25 30
 Leu Tyr His Pro Gln Gln Ser His Leu Val Gly Ser Thr Ala Leu Gly
 35 40 45

Leu Thr Leu Pro Leu Leu Tyr Pro Arg Glu Pro Glu Ala Gln Gly Trp
 50 55 60

Lys Asp Pro Val Ala Gly Gly Gly
 65 70

<210> 268

<211> 137

<212> PRT

<213> Homo sapiens

<400> 268

Val Pro Pro Cys Pro Gln Leu Arg Glu Leu Cys Pro Gly Val Asn Asn
 1 5 10 15

Gln Pro Tyr Leu Cys Glu Ser Gly His Cys Cys Gly Glu Thr Gly Cys
 20 25 30

Cys Thr Tyr Tyr Tyr Glu Leu Trp Trp Phe Trp Leu Leu Trp Thr Val
 35 40 45

Leu Ile Leu Phe Ser Cys Cys Cys Ala Phe Arg His Arg Arg Ala Lys
 50 55 60

Leu Arg Leu Gln Gln Gln Arg Gln Val Glu Ile Asn Leu Leu Ala
 65 70 75 80

Tyr His Gly Ala Cys His Gly Ala Gly Pro Phe Pro Thr Gly Ser Leu
 85 90 95

Leu Asp Leu Arg Phe Leu Ser Thr Phe Lys Pro Pro Ala Tyr Glu Asp
 100 105 110

Val Val His Arg Pro Gly Thr Thr Ser Pro Pro Leu Tyr Cys Gly Pro
 115 120 125

Lys Ala Pro Leu Glu Val Val Ser Ser
 130 135

<210> 269

<211> 308

<212> PRT

<213> Homo sapiens

<400> 269

Lys His Ala Thr Glu Gln Glu Lys Thr Glu Glu Gly Leu Gly Pro Asn
 1 5 10 15

Val Lys Gly Ile Val Thr Met Leu Met Leu Met Leu Leu Met Met Phe
 20 25 30

Ala Val His Cys Thr Trp Val Thr Ser Asn Ala Tyr Ser Ser Pro Ser
 35 40 45

Val Val Leu Ala Ser Tyr Asn His Asp Gly Thr Arg Asn Ile Leu Asp
 50 55 60
 Asp Phe Arg Glu Ala Tyr Phe Trp Leu Arg Gln Asn Thr Asp Glu His
 65 70 75 80
 Ala Arg Val Met Ser Trp Trp Asp Tyr Gly Tyr Gln Ile Ala Gly Met
 85 90 95
 Ala Asn Arg Thr Thr Leu Val Asp Asn Asn Thr Trp Asn Asn Ser His
 100 105 110
 Ile Ala Leu Val Gly Lys Ala Met Ser Ser Asn Glu Thr Ala Ala Tyr
 115 120 125
 Lys Ile Met Arg Thr Leu Asp Val Asp Tyr Val Leu Val Ile Phe Gly
 130 135 140
 Gly Val Ile Gly Tyr Ser Gly Asp Asp Ile Asn Lys Phe Leu Trp Met
 145 150 155 160
 Val Arg Ile Ala Glu Gly Glu His Pro Lys Asp Ile Arg Glu Ser Asp
 165 170 175
 Tyr Phe Thr Pro Gln Gly Glu Phe Arg Val Asp Lys Ala Gly Ser Pro
 180 185 190
 Thr Leu Leu Asn Cys Leu Met Tyr Lys Met Ser Tyr Tyr Arg Phe Gly
 195 200 205
 Glu Met Gln Leu Asp Phe Arg Thr Pro Pro Gly Phe Asp Arg Thr Arg
 210 215 220
 Asn Ala Glu Ile Gly Asn Lys Asp Ile Lys Phe Lys His Leu Glu Glu
 225 230 235 240
 Ala Phe Thr Ser Glu His Trp Leu Val Arg Ile Tyr Lys Val Lys Ala
 245 250 255
 Pro Asp Asn Arg Glu Thr Leu Asp His Lys Pro Arg Val Thr Asn Ile
 260 265 270
 Phe Pro Lys Gln Lys Tyr Leu Ser Lys Lys Thr Thr Lys Arg Lys Arg
 275 280 285
 Gly Tyr Ile Lys Asn Lys Leu Val Phe Lys Lys Gly Lys Lys Ile Ser
 290 295 300
 Lys Lys Thr Val
 305

<210> 270

<211> 113

<212> PRT

<213> Homo sapiens

<400> 270

Ile Pro Glu Asp Pro His Ile Asp Glu Ser Lys Ala Lys His Gln Ala
 1 5 10 15

Ile Ile Met Ser Thr Ser Leu Arg Val Ser Pro Ser Ile His Gly Tyr
 20 25 30

His Phe Asp Thr Ala Ser Arg Lys Lys Ala Val Gly Asn Ile Phe Glu
 35 40 45

Asn Thr Asp Gln Glu Ser Leu Glu Arg Leu Phe Arg Asn Ser Gly Asp
 50 55 60

Lys Lys Ala Glu Glu Arg Ala Lys Ile Ile Phe Ala Ile Asp Gln Asp
 65 70 75 80

Val Glu Glu Lys Thr Arg Ala Leu Met Ala Leu Lys Lys Arg Thr Lys
 85 90 95

Asp Lys Leu Phe Gln Phe Leu Lys Leu Arg Lys Tyr Ser Ile Lys Val
 100 105 110

His

<210> 271

<211> 100

<212> PRT

<213> Homo sapiens

<400> 271

Gln Met Gln His Phe Ala Ala Thr Leu Gln Ala Ser Leu Leu Ser Gly
 1 5 10 15

Leu Gln Arg Leu Glu Arg Asp Arg Asp Trp Lys Gly Thr Arg Thr Glu
 20 25 30

Gln Thr Gly Tyr Lys Asp Ser Lys Gln Phe His Ala Leu Cys Cys Tyr
 35 40 45

Arg Gly Glu Gln Asn Ala Phe Ser Lys Asp Leu Lys Thr Leu Pro Ser
 50 55 60

Leu Gln Glu Arg Ile Asp Ala Asp Arg Arg Ala Trp Thr Asp Val Met
 65 70 75 80

Arg Thr Lys Glu Asn Arg Trp Leu Glu Met Thr Phe Ile Gln Gly His
 85 90 95

Phe Val Arg Pro
 100

<210> 272

<211> 20

<212> PRT

<213> Homo sapiens

<400> 272

Pro Arg Ile Pro Val Thr Leu Asn Met Lys Met Val Met Pro Ser Cys
 1 5 10 15

Gln Gly Leu Asp
 20

<210> 273

<211> 136

<212> PRT

<213> Homo sapiens

<400> 273

Cys Pro Pro Val Lys Ala Leu Ile Glu His Glu Met Lys Asn Gly Ile
 1 5 10 15

Pro Ala Asn Arg Ile Val Leu Gly Gly Phe Ser Gln Gly Gly Ala Leu
 20 25 30

Ser Leu Tyr Thr Ala Leu Thr Cys Pro His Pro Leu Ala Gly Ile Val
 35 40 45

Ala Leu Ser Cys Trp Leu Pro Leu His Arg Ala Phe Pro Gln Ala Ala
 50 55 60

Asn Gly Ser Ala Lys Asp Leu Ala Ile Leu Gln Cys His Gly Glu Leu
 65 70 75 80

Asp Pro Met Val Pro Val Arg Phe Gly Ala Leu Thr Ala Glu Lys Leu
 85 90 95

Arg Ser Val Val Thr Pro Ala Arg Val Gln Phe Lys Thr Tyr Pro Gly
 100 105 110

Val Met His Ser Ser Cys Pro Gln Glu Met Ala Ala Val Lys Glu Phe
 115 120 125

Leu Glu Lys Leu Leu Pro Pro Val
 130 135

<210> 274

<211> 91

<212> PRT

<213> Homo sapiens

<400> 274

Met Trp Val Leu Lys Leu Asp Arg Asn Thr Met Asn Val Lys Ile Pro
 1 5 10 15

Pro Ile Phe Cys Ser Lys Lys Lys Asn Pro Lys Asn Lys Lys Thr Asn
 20 25 30

Lys Lys Pro Arg Met Phe Phe Gly Ile Thr Glu Ile Ser Gln Thr Trp
 35 40 45

Val Phe Ser Tyr Ser Leu Cys Thr Phe Phe Gln Val Leu Cys Phe Ala
 50 55 60
 Cys Ser Thr Asp Cys Val Ile Leu Ile Phe Ile Asp Ser Ser Leu Ala
 65 70 75 80
 Met Gln Tyr Pro Cys Leu Thr His Arg Cys Leu
 85 90

<210> 275
 <211> 75
 <212> PRT
 <213> Homo sapiens

<400> 275
 Glu Thr Ile Ala Asp Asn Ala Leu Pro Ser Thr Glu Ile Thr Leu Glu
 1 5 10 15
 Ser Pro Leu Leu Gly Ser Phe Asp Cys Leu Thr Gln Asp Val Leu Cys
 20 25 30
 His Ser Glu Val Phe Ile Trp Gly Arg Ser Leu Tyr Gly Asp Val Asn
 35 40 45
 Asp Ser Val Ser Gly Leu Cys Ile Thr Ser His Trp Ser Glu Thr Pro
 50 55 60
 Val Cys Gln Ala Trp Ile Leu His Cys Lys Thr
 65 70 75

<210> 276
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 276
 Gly Gly Lys Glu Lys Thr Lys Lys Ile Gln Leu Arg Asn Arg Thr Met
 1 5 10 15
 Ile Gln His Leu Gln Lys Ala Ser Ser Ile Ser Leu Lys Lys Ala Thr
 20 25 30
 Asp Cys Ala Ser Ala Gly Ser Glu Lys Gly Trp Ala Ala Gly Thr Ala
 35 40 45
 Ala Ser Trp Val Thr Arg Gln Gln Ser Gln Arg Leu Gly Val Arg Leu
 50 55 60
 Arg Thr Pro Leu Trp Pro Glu His Lys Arg His Trp His Cys Lys Leu
 65 70 75 80
 Ser Val Thr Trp Pro Ser Phe Leu Ser Ser Ile Ser Pro Asn Ile Cys
 85 90 95
 Ala His Pro Glu Glu Leu Ser Gly Asn Ser Arg Val Arg Ala Gly Arg
 100 105 110

Arg Gly Glu Arg Thr Lys Arg Glu
 115 120

<210> 277
 <211> 113
 <212> PRT
 <213> Homo sapiens

<400> 277
 Val Ala Pro Phe Pro Ile Pro Thr Gln Glu His Arg Gly Gly Gly Glu
 1 5 10 15
 Gly Arg Leu Ser Leu Ser Lys Ser Ser Tyr Leu His Phe Arg Arg Lys
 20 25 30
 Ala Glu Thr Gln Ser Arg Leu Tyr Ile Asn Cys Leu Ala Asp Arg Val
 35 40 45
 Thr Lys Thr His Trp Ser Thr Cys Ala Phe Ser Ser Leu Cys Pro Ser
 50 55 60
 Leu Ile Gln Thr Ala Thr Cys Gln Ser Pro Ala Thr Leu Lys Thr His
 65 70 75 80
 Gly Gln Leu Pro Gly Phe Thr Lys Leu Thr Ala Phe Leu His Lys Val
 85 90 95
 Lys Thr Thr Thr Ala Ser Val Cys Gly Pro Ser Ala Thr Thr Lys Leu
 100 105 110
 Ser

<210> 278
 <211> 85
 <212> PRT
 <213> Homo sapiens

<400> 278
 Pro Tyr Asp Pro Ala Cys Leu Leu Ile Phe Ser Leu Pro Leu Pro Phe
 1 5 10 15
 Leu Ser Leu Ser Ser Arg Ser His Leu Pro Gly Leu Lys Tyr Phe Val
 20 25 30
 Gly Ile Ala Tyr Tyr Ile Ile Leu Ala Asp Glu Pro Gln Asp Asn Val
 35 40 45
 Tyr Thr His Thr His Thr Tyr Thr His Thr Lys Ser Gln Leu Leu Lys
 50 55 60
 Ser Gly Leu Gly Ile Arg Leu Leu Cys Pro Val Lys Asn Ser Cys Thr
 65 70 75 80

Glu Val Ile Val Thr
85

<210> 279
<211> 69
<212> PRT
<213> Homo sapiens

<400> 279
Asn Ser Phe Lys Val Val Lys Lys Leu Ala Thr Thr Trp Ser Leu Ser
1 5 10 15
Ile Lys Arg Lys Gln Gly Lys Gln Thr His Ser Leu Asp Gln Lys Lys
20 25 30
Leu Asp Gln Val His Trp Asn Gln Ser Val Thr Thr Gln Val Thr Met
35 40 45
Thr Ser Val Gln Glu Phe Phe Thr Gly His Arg Ser Leu Ile Pro Ser
50 55 60
Pro Leu Phe Asn Ser
65

<210> 280
<211> 593
<212> PRT
<213> Homo sapiens

<400> 280
Val Ser Glu Lys Cys Arg Ile Asp Thr Glu Ile Leu Pro Ser Leu Phe
1 5 10 15
Met Arg Cys Thr Thr Asp Leu Asn Arg Lys Asp Lys Phe Pro Ala Ile
20 25 30
Thr His Leu Lys Phe Leu Ala Arg Asp Met Ser Glu Gln Val Leu Leu
35 40 45
Cys Ala Ser Ser Gln Thr Ser Ser Ile Val Glu Cys Trp Ser Leu Arg
50 55 60
Lys Glu Gly Leu Pro Val Asn Asn Ile Phe Gln Gln Ile Ser Pro Val
65 70 75 80
Val Gly Asp Lys Gln Pro Thr Ile Leu Lys Trp Arg Ile Leu Ser Ala
85 90 95
Thr Asn Asp Leu Asp Arg Val Ser Ala Val Ala Leu Pro Lys Leu Pro
100 105 110
Ile Ser Leu Thr Asn Thr Asp Leu Lys Val Ala Ser Asp Thr Gln Phe
115 120 125
Tyr Pro Gly Leu Gly Leu Ala Leu Ala Phe His Asp Gly Ser Val His
130 135 140

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Val | His | Arg | Leu | Ser | Leu | Gln | Thr | Met | Ala | Val | Phe | Tyr | Ser | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Ala | Pro | Arg | Pro | Val | Asp | Glu | Pro | Ala | Met | Lys | Arg | Pro | Arg | Thr |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ala | Gly | Pro | Ala | Val | His | Leu | Lys | Ala | Met | Gln | Leu | Ser | Trp | Thr | Ser |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Leu | Ala | Leu | Val | Gly | Ile | Asp | Ser | His | Gly | Lys | Leu | Ser | Val | Leu | Arg |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Ser | Pro | Ser | Met | Gly | His | Pro | Leu | Glu | Val | Gly | Leu | Ala | Leu | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| His | Leu | Leu | Phe | Leu | Leu | Glu | Tyr | Cys | Met | Val | Thr | Gly | Tyr | Asp | Trp |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Trp | Asp | Ile | Leu | Leu | His | Val | Gln | Pro | Ser | Met | Val | Gln | Ser | Leu | Val |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Glu | Lys | Leu | His | Glu | Glu | Tyr | Thr | Arg | Gln | Thr | Ala | Ala | Leu | Gln | Gln |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Val | Leu | Ser | Thr | Arg | Ile | Leu | Ala | Met | Lys | Ala | Ser | Leu | Cys | Lys | Leu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ser | Pro | Cys | Thr | Val | Thr | Arg | Val | Cys | Asp | Tyr | His | Thr | Lys | Leu | Phe |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Leu | Ile | Ala | Ile | Ser | Ser | Thr | Leu | Lys | Ser | Leu | Leu | Arg | Pro | His | Phe |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Asn | Thr | Pro | Asp | Lys | Ser | Pro | Gly | Asp | Arg | Leu | Thr | Glu | Ile | Cys |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Thr | Lys | Ile | Thr | Asp | Val | Asp | Ile | Asp | Lys | Val | Met | Ile | Asn | Leu | Lys |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Thr | Glu | Glu | Phe | Val | Leu | Asp | Met | Asn | Thr | Leu | Gln | Ala | Leu | Gln | Gln |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Leu | Leu | Gln | Trp | Val | Gly | Asp | Phe | Val | Leu | Tyr | Leu | Leu | Ala | Ser | Leu |
| | | 370 | | | | 375 | | | | | 380 | | | | |
| Pro | Asn | Gln | Gly | Ser | Leu | Leu | Arg | Pro | Gly | His | Ser | Phe | Leu | Arg | Asp |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Gly | Thr | Ser | Leu | Gly | Met | Leu | Arg | Glu | Leu | Met | Val | Val | Ile | Arg | Ile |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Trp | Gly | Leu | Leu | Lys | Pro | Ser | Cys | Leu | Pro | Val | Tyr | Thr | Ala | Thr | Ser |
| | | | | 420 | | | | 425 | | | | | 430 | | |
| Asp | Thr | Gln | Asp | Ser | Met | Ser | Leu | Leu | Phe | Arg | Leu | Leu | Thr | Lys | Leu |
| | | 435 | | | | | 440 | | | | | 445 | | | |

Trp Ile Cys Cys Arg Asp Glu Gly Pro Ala Ser Glu Pro Asp Glu Ala
 450 455 460
 Leu Val Asp Glu Cys Cys Leu Leu Pro Ser Gln Leu Leu Ile Pro Ser
 465 470 475 480
 Leu Asp Trp Leu Pro Ala Ser Asp Gly Leu Val Ser Arg Leu Gln Pro
 485 490 495
 Lys Gln Pro Leu Arg Leu Gln Phe Gly Arg Ala Pro Thr Leu Pro Gly
 500 505 510
 Ser Ala Ala Thr Leu Gln Leu Asp Gly Leu Ala Arg Ala Pro Gly Gln
 515 520 525
 Pro Lys Ile Asp His Leu Arg Arg Leu His Leu Gly Ala Cys Pro Thr
 530 535 540
 Glu Glu Cys Lys Ala Cys Thr Arg Cys Gly Cys Val Thr Met Leu Lys
 545 550 555 560
 Ser Pro Asn Arg Thr Thr Ala Val Lys Gln Trp Glu Gln Arg Trp Ile
 565 570 575
 Lys Asn Cys Leu Cys Gly Gly Leu Trp Trp Arg Val Pro Leu Ser Tyr
 580 585 590

Pro

<210> 281
 <211> 292
 <212> PRT
 <213> Homo sapiens

<400> 281
 Leu Arg Gly Thr Arg His Gln Ser Pro Pro His Arg Gln Phe Leu Ile
 1 5 10 15
 Gln Arg Cys Ser His Cys Phe Thr Ala Val Val Leu Leu Gly Asp Leu
 20 25 30
 Ser Met Val Thr Gln Pro His Leu Val Gln Ala Leu His Ser Ser Val
 35 40 45
 Gly Gln Ala Pro Arg Cys Ser Leu Arg Arg Trp Ser Ile Leu Gly Trp
 50 55 60
 Pro Gly Ala Leu Ala Arg Pro Ser Ser Cys Arg Val Ala Ala Leu Pro
 65 70 75 80
 Gly Ser Val Gly Ala Arg Pro Asn Cys Arg Arg Arg Gly Cys Leu Gly
 85 90 95
 Cys Arg Arg Leu Thr Arg Pro Ser Leu Ala Gly Ser Gln Ser Arg Leu
 100 105 110

Ser Leu Val Trp
290

<210> 282

<211> 172

<212> PRT

<213> Homo sapiens

<400> 282

Thr Pro Ala Leu Arg Ala Arg Ser Leu Arg Asp Arg Cys Ala Arg Ala
1 5 10 15

Pro Cys Pro His Gly Gly Gln Gln Arg Arg Arg Arg Arg Leu Asn Ala
20 25 30

Glu Gly Ala Glu Gly Ala Arg Gly Gly Gly Ser Ser Tyr Ser Glu Met
35 40 45

Ala Glu Thr Val Ala Asp Thr Arg Arg Leu Ile Thr Lys Pro Gln Asn
50 55 60

Leu Asn Asp Ala Tyr Gly Pro Pro Ser Asn Phe Leu Glu Ile Asp Val
65 70 75 80

123

Ser Asn Pro Gln Thr Val Gly Val Gly Arg Gly Arg Phe Thr Thr Tyr
85 90 95
Glu Ile Arg Val Lys Thr Asn Leu Pro Ile Phe Lys Leu Lys Glu Ser
100 105 110
Thr Val Arg Arg Arg Tyr Ser Asp Phe Glu Trp Leu Arg Ser Glu Leu
115 120 125
Glu Arg Glu Ser Lys Val Val Val Pro Pro Leu Pro Gly Lys Ala Phe
130 135 140
Leu Arg Gln Phe Leu Leu Glu Glu Met Met Glu Tyr Leu Met Thr Ile
145 150 155 160
Leu Leu Arg Lys Glu Asn Lys Gly Trp Ser Ser Leu
165 170

<210> 283
<211> 106
<212> PRT
<213> Homo sapiens

<400> 283
Asn Tyr Leu Gly Arg Phe Gln Pro Gln Trp Phe Asn Asp Asn Lys Thr
1 5 10 15
Thr Lys His Gly Thr Ser Asn Ser Leu Ile Lys Leu Leu Ser His Leu
20 25 30
Phe His Arg Met Met Arg Phe Phe Leu Phe Thr Val Ser His Gln Gly
35 40 45
Lys Lys Asn Pro Pro Thr Ser Cys Leu Phe Phe Phe Leu Met Pro Gly
50 55 60
Ile Ser Ile His Cys Leu Phe Lys Arg Pro Met Gln Lys Lys Val Asp
65 70 75 80
Lys Ala Leu Ala Gln Glu Leu Gly Leu Pro Val Val Val Pro Gly Leu
85 90 95
Pro Cys Trp Gly Val Pro Lys Ser Val Pro
100 105

<210> 284
<211> 105
<212> PRT
<213> Homo sapiens

<400> 284
Met Gly Asn Phe Phe Phe Phe Glu Pro Gly Thr Cys Tyr Val Ala Gln
1 5 10 15
Ala Gly Leu Glu Leu Leu Asn Ser Ser Asp Pro Leu Thr Ser Ala Ser
20 25 30

Gln Ile Ala Glu Thr Thr Gly Thr His His Cys Thr Trp Leu Lys Thr
 35 40 45
 Ile Phe Leu Lys Asn Lys Ser Thr Ala Leu His Leu Tyr Leu Leu Val
 50 55 60
 Ser Leu Gln Phe Lys His Thr Ile Asn Asp Tyr Asn Ile Leu Phe Lys
 65 70 75 80
 Ala Gly Arg Ser Gly Ser Trp Leu Gln Leu Glu Gln Phe Ile Thr Ser
 85 90 95
 Gly Tyr Leu Arg Ala Arg Lys Ile Gln
 100 105

<210> 285
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 285
 Thr Gly Met Gly Gly Gly Ser Gly Cys Arg Glu Leu Leu Cys Pro Cys
 1 5 10 15
 Lys Gly Ala Glu Thr Pro Val Glu Leu Arg Lys Ser Asp Gly Ile Tyr
 20 25 30
 Arg Val Leu Gly Lys Pro Trp Leu Cys Leu His His Gly Glu Arg Pro
 35 40 45
 Trp Ala Gly Ser Pro Pro Ser Cys Arg Ser Val Arg Leu Asp Ala Asp
 50 55 60
 Gly Gly Ser Asp Gln Leu Ala Ser Val Ser Leu Arg His Glu Ala Ala
 65 70 75 80
 Phe Ser Ser Gly Phe Gln Ser His Ser Gly Leu Pro Met Ala Asp Arg
 85 90 95
 Val Ala Lys Val Arg Asn Gly Lys Cys Ile Ala Val Tyr Leu Pro Ser
 100 105 110
 Pro Thr Lys Gln Ile Thr
 115

<210> 286
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 286
 Tyr Ala Asn Gln Ser Ser Ser Leu Arg Phe Lys Ile Lys Tyr Lys Leu
 1 5 10 15

Leu Cys Phe Ser Thr His Ser Gly Ser Ile Val Pro Glu Pro Asp Cys
 20 25 30
 Tyr Phe Phe Ile Leu Asn Ile Ile Phe Pro His Leu Ile Cys Leu Pro
 35 40 45
 Leu Ile His Arg His Leu Glu Lys Glu Met Gly Gly Cys Leu Leu Ser
 50 55 60
 Leu Ser Leu Cys Phe Val Pro Val Val Arg Leu Ala Ala Ser Val Ala
 65 70 75 80
 Arg Trp Ala Trp Leu Glu Pro Trp Val Arg Gln Val Ala Gly Gly Asp
 85 90 95
 Arg Glu Arg Leu Arg Gly Lys Trp Trp His Leu Leu Leu
 100 105

<210> 287
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 287
 Ser Gln Leu Leu Gly Arg Leu Arg Gln Glu Asn His Leu Asn Ser Gly
 1 5 10 15
 Gly Arg Gly Cys Ser Glu Leu Arg Ser Cys His Cys Thr Pro Ala Trp
 20 25 30
 Ala Thr Arg Val Lys Leu Arg Leu Lys Lys Lys Lys Lys Glu Met Phe
 35 40 45
 Phe Ile Phe Phe Met Leu Ser Ile Gln Ala Leu Phe His Gly Gln Gln
 50 55 60
 Val Ile Phe His Asn Val Asp Phe Pro Lys
 65 70

<210> 288
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 288
 Arg Arg Gly Phe Leu His Val Gly Gln Ala Gly Leu Glu Phe Leu Thr
 1 5 10 15
 Ser Gly Asp Pro Pro Ala Ser Ala Thr Gln Ser Ala Gly Ile Thr Gly
 20 25 30
 Ile Ser His Arg Glu Arg Pro Ile Leu Leu Phe Ile Tyr Phe Leu Arg
 35 40 45
 Trp Ser Leu Ala Leu Phe Arg Asp Leu Arg Pro Leu Gln Pro Ser Pro
 50 55 60

Leu Gln Phe
65

<210> 289
<211> 84
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1)..(84)
<223> Any naturally occurring amino acid

<400> 289
Ser Thr Arg Pro Arg Glu Arg Arg Asn Arg Ser Val Asp Glu Cys Gln
1 5 10 15

Leu Ile Asn Val Lys Xaa Arg His Xaa Leu Val Cys Leu Xaa Cys Phe
20 25 30

Cys Leu Tyr Xaa Gln Pro Asp Xaa Val Ser Xaa Glu Tyr Lys Xaa Trp
35 40 45

Gly Leu Leu Pro Gln Xaa Leu Phe Xaa Ile Ser Xaa Glu Lys Lys Asn
50 55 60

Asp Arg Xaa Xaa Gly Xaa Ile Xaa Arg Xaa Ala Arg Phe Xaa Ser Thr
65 70 75 80

Asn Xaa Asn Xaa

<210> 290
<211> 77
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1)..(72)
<223> Any naturally occurring amino acid

<400> 290
Met Ser Xaa Xaa Asp Thr Xaa Trp Cys Val Xaa Ala Val Phe Ala Phe
1 5 10 15

Thr Xaa Asn Pro Thr Val Phe His Xaa Asn Thr Asn Xaa Gly Xaa Phe
20 25 30

Tyr Pro Xaa Leu Ser Ser Xaa Leu Val Lys Lys Lys Lys Met Ile Gly
35 40 45

Xaa Xaa Xaa Glu Phe Xaa Gly Lys Pro Xaa Xaa Gln Ala Leu Xaa Lys
50 55 60

Ile Xaa Ser Trp Xaa Xaa Leu Thr Ser Leu Pro Xaa Xaa
 65 70 75

<210> 291

<211> 309

<212> PRT

<213> Homo sapiens

<400> 291

Arg Ala Ala Ser Gly Arg Ser Gly Ser Ser Val Arg Met Ser Ala Pro
 1 5 10 15

Arg Ser Arg Pro Ala Ser Met Arg Trp Cys Pro Ala Pro Arg Arg Ala
 20 25 30

Cys Thr Thr Ser Thr Arg Trp Thr Gly Pro Pro Cys Ala Thr Ser Thr
 35 40 45

Ser Ser Ala Arg Ala Thr Arg Thr Gly Pro Ser Cys Arg Ser Ala Gly
 50 55 60

Arg Ala Arg Ser Ala Ser Tyr Pro Pro Gly Asp Val Asp Glu Ile Pro
 65 70 75 80

Asp Trp Val His Gln Leu Val Ile Gln Lys Leu Val Glu His Arg Val
 85 90 95

Ile Pro Glu Gly Phe Val Asn Ser Ala Val Ile Asn Asp Tyr Gln Pro
 100 105 110

Gly Gly Cys Ile Val Ser His Val Asp Pro Ile His Ile Phe Glu Arg
 115 120 125

Pro Ile Val Ser Val Ser Phe Phe Ser Asp Ser Ala Leu Cys Phe Gly
 130 135 140

Cys Lys Phe Gln Phe Lys Pro Ile Arg Val Ser Glu Pro Val Leu Ser
 145 150 155 160

Leu Pro Val Arg Arg Gly Ser Val Thr Val Leu Ser Gly Tyr Ala Ala
 165 170 175

Asp Glu Ile Thr His Cys Ile Arg Pro Gln Asp Ile Lys Glu Arg Arg
 180 185 190

Ala Val Ile Ile Leu Arg Lys Thr Arg Leu Asp Ala Pro Arg Leu Glu
 195 200 205

Thr Lys Ser Leu Ser Ser Ser Val Leu Pro Pro Ser Tyr Ala Ser Asp
 210 215 220

Arg Leu Ser Gly Asn Asn Arg Asp Pro Ala Leu Lys Pro Lys Arg Ser
 225 230 235 240

His Arg Lys Ala Asp Pro Asp Ala Ala His Arg Pro Arg Ile Leu Glu
 245 250 255

Met Asp Lys Glu Glu Asn Arg Arg Ser Val Leu Leu Pro Thr His Arg
 260 265 270

Arg Arg Gly Ser Phe Ser Ser Glu Asn Tyr Trp Arg Lys Ser Tyr Glu
 275 280 285

Ser Ser Glu Asp Cys Ser Glu Ala Ala Gly Ser Pro Ala Arg Lys Val
 290 295 300

Lys Met Arg Arg His
 305

<210> 292
 <211> 191
 <212> PRT
 <213> Homo sapiens

<400> 292
 Ser Cys Leu Pro Glu Asp Asp Asp Cys Ser Ala Leu Leu Asp Val Leu
 1 5 10 15

Arg Pro Tyr Ala Val Ser Asp Phe Ile Ser Ser Ile Ser Thr Glu His
 20 25 30

Ser His Ala Ser Pro Ala His Arg Gln Gly Lys His Trp Phe Arg His
 35 40 45

Pro Asn Arg Leu Glu Leu Glu Leu Ala Ala Glu Ala Gln Arg Arg Val
 50 55 60

Ala Lys Glu Gly His Gly His Asp Gly Ala Leu Glu Asp Val Asp Gly
 65 70 75 80

Val His Val Gly His Asp Ala Ala Ala Gly Leu Val Val Val Asp Asp
 85 90 95

Arg Ala Val Asp Glu Ala Leu Gly Asp Asp Ala Val Leu His Gln Leu
 100 105 110

Leu Asp His Gln Leu Met His Pro Val Arg Asp Leu Val Asp Val Ala
 115 120 125

Arg Arg Val Arg Gly Ala Pro Gly Pro Ala Arg Ala Ser Ala Ala Gly
 130 135 140

Pro Arg Thr Cys Ser Pro Arg Arg Arg Ser Thr Cys Cys Ala Gly Gly
 145 150 155 160

Pro Gly Pro Pro Cys Ala Arg Cys Thr Gly Pro Ser Arg Arg Gly Thr
 165 170 175

Pro Pro His Arg Cys Gly Pro Arg Ser Trp Ser Thr His Pro Asp
 180 185 190

<210> 293
 <211> 478

<212> PRT

<213> Homo sapiens

<400> 293

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Met Gly Arg Cys Cys Phe Tyr Thr Ala Gly Thr Leu Ser Leu Leu Leu
 1           5           10           15

Leu Val Thr Ser Val Thr Leu Leu Val Ala Arg Val Phe Gln Lys Ala
          20           25           30

Val Asp Gln Ser Ile Glu Lys Lys Ile Val Leu Arg Asn Gly Thr Glu
          35           40           45

Ala Phe Asp Ser Trp Glu Lys Pro Pro Leu Pro Val Tyr Thr Gln Phe
 50           55           60

Tyr Phe Phe Asn Val Thr Asn Pro Glu Glu Ile Leu Arg Gly Glu Thr
 65           70           75           80

Pro Arg Val Glu Glu Val Gly Pro Tyr Thr Tyr Arg Glu Leu Arg Asn
          85           90           95

Lys Ala Asn Ile Gln Phe Gly Asp Asn Gly Thr Thr Ile Ser Ala Val
          100          105          110

Ser Asn Lys Ala Tyr Val Phe Glu Arg Asp Gln Ser Val Gly Asp Pro
          115          120          125

Lys Ile Asp Leu Ile Arg Thr Leu Asn Ile Pro Val Leu Thr Val Ile
          130          135          140

Glu Trp Ser Gln Val His Phe Leu Arg Glu Ile Ile Glu Ala Met Leu
          145          150          155          160

Lys Ala Tyr Gln Gln Lys Leu Phe Val Thr His Thr Val Asp Glu Leu
          165          170          175

Leu Trp Gly Tyr Lys Asp Glu Ile Leu Ser Leu Ile His Val Phe Arg
          180          185          190

Pro Asp Ile Ser Pro Tyr Phe Gly Leu Phe Tyr Glu Lys Asn Gly Thr
          195          200          205

Asn Asp Gly Asp Tyr Val Phe Leu Thr Gly Glu Asp Ser Tyr Leu Asn
          210          215          220

Phe Thr Lys Ile Val Glu Trp Asn Gly Lys Thr Ser Leu Asp Trp Trp
          225          230          235          240

Ile Thr Asp Lys Cys Asn Met Ile Asn Gly Thr Asp Gly Asp Ser Phe
          245          250          255

His Pro Leu Ile Thr Lys Asp Glu Val Leu Tyr Val Phe Pro Ser Asp
          260          265          270

Phe Cys Arg Ser Val Tyr Ile Thr Phe Ser Asp Tyr Glu Ser Val Gln
          275          280          285

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Gly Leu Pro Ala Phe Arg Tyr Lys Val Pro Ala Glu Ile Leu Ala Asn
 290 295 300
 Thr Ser Asp Asn Ala Gly Phe Cys Ile Pro Glu Gly Asn Cys Leu Gly
 305 310 315 320
 Ser Gly Val Leu Asn Val Ser Ile Cys Lys Asn Gly Ala Pro Ile Ile
 325 330 335
 Met Ser Phe Pro His Phe Tyr Gln Ala Asp Glu Arg Phe Val Ser Ala
 340 345 350
 Ile Glu Gly Met His Pro Asn Gln Glu Asp His Glu Thr Phe Val Asp
 355 360 365
 Ile Asn Pro Leu Thr Gly Ile Ile Leu Lys Ala Ala Lys Arg Phe Gln
 370 375 380
 Ile Asn Ile Tyr Val Lys Lys Leu Asp Asp Phe Val Glu Thr Gly Asp
 385 390 395 400
 Ile Arg Thr Met Val Phe Pro Val Met Tyr Leu Asn Glu Ser Val His
 405 410 415
 Ile Asp Lys Glu Thr Ala Ser Arg Leu Lys Ser Met Ile Asn Thr Thr
 420 425 430
 Leu Ile Ile Thr Asn Ile Pro Tyr Ile Ile Met Ala Leu Gly Val Phe
 435 440 445
 Phe Gly Leu Val Phe Thr Trp Leu Ala Cys Lys Gly Gln Gly Ser Met
 450 455 460
 Asp Glu Gly Thr Ala Asp Glu Arg Ala Pro Leu Ile Arg Thr
 465 470 475

<210> 294

<211> 266

<212> PRT

<213> Homo sapiens

<400> 294

Ala Phe Leu Pro Ser Pro Thr Val Ala Ala Gln Ala Ala Ala Arg Glu
 1 5 10 15
 His Ala Gly Gly His Ser Ala Ala Lys Asn Gly Ala Thr Gly Val Glu
 20 25 30
 Leu Asp Ile Glu Phe Thr Ser Asp Gly Ile Pro Val Leu Met His Asp
 35 40 45
 Asn Thr Val Asp Arg Thr Thr Asp Gly Thr Gly Arg Leu Cys Asp Leu
 50 55 60
 Thr Phe Glu Gln Ile Arg Lys Leu Asn Pro Ala Ala Asn His Arg Leu
 65 70 75 80



| | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 295 | | | | | | | | | | | | | | | |
| Gln | Ile | Leu | Pro | Ala | Phe | Ile | Leu | Leu | Phe | Asn | Gly | Leu | Lys | Arg | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ala | Cys | His | Ala | Glu | His | Glu | Thr | Glu | Glu | Leu | Gly | Ser | Asp | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Asp | Ile | Asp | Glu | Asp | Gly | Gln | Glu | Tyr | Leu | Glu | Ile | Leu | Ala | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Ala | Gly | Glu | Asp | Gly | Asp | Asp | Glu | Asp | Trp | Glu | Glu | Asp | Asp | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Glu | Thr | Ala | Leu | Glu | Gly | Tyr | Ser | Thr | Ile | Ile | Asp | Asp | Glu | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

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Asn Pro Val Asp Glu Tyr Gln Ile Phe Lys Ala Ile Phe Gln Thr Ile
85 90 95
Gln Asn Arg Asn Pro Val Trp Tyr Gln Ala Leu Thr His Gly Leu Asn
100 105 110
Glu Glu Gln Arg Lys Gln Leu Gln Asp Ile Ala Thr Leu Ala Asp Gln
115 120 125
Arg Arg Ala Ala His Glu Ser Lys Met Ile Glu Lys His Gly Gly Tyr
130 135 140
Lys Phe Ser Ala Pro Val Val Pro Ser Ser Phe Asn Phe Gly Gly Pro
145 150 155 160
Ala Pro Gly Met Asn
165

<210> 296
<211> 13
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Partial cDNA
sequence e.g., EST or contig S

<400> 296
gcctcaagtt atc

13

<210> 297
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Consensus
sequence C

<400> 297
atgtcctagc ctcaagttat cagatgcaa

29